NEW REMEDIES.

AN ILLUSTRATED MONTHLY TRADE JOURNAL OF MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

VOL. X., NO. 7. WHOLE NO. 85.

FRED'K A. CASTLE, M.D., - - EDITOR.
CHARLES RICE, PH.D., - ASSOCIATE EDITOR.

PUBLISHED BY

WILLIAM WOOD & CO., No. 27 Great Jones St., N. Y.

JULY, 1881.

SUBSCRIPTION PRICE, per year, - - - - - $2.00
SINGLE COPIES, - - - - - - - - - .20

Address all communications relating to the **business** of NEW REMEDIES, such as subscriptions, advertisements, change of Post-Office address, etc., to WILLIAM WOOD & Co., 27 Great Jones St., New York City, to whose order all postal money orders and checks should be made payable. Communications intended for the **Editor** should be addressed to THE EDITOR OF NEW REMEDIES, in care of William Wood & Co., 27 Gt. Jones St., New York City.

NEW REMEDIES is issued the 25th of each month, dated for the month ahead. Changes of advertisements should reach us before the 10th. New advertisements can occasionally be inserted after the 18th.

REGULAR ADVERTISEMENTS according to size, location and time. Special rates on application.

ELECTROTYPES of the illustrations contained in NEW REMEDIES will be furnished for 50c. per square inch.

EDITORIAL.

WE wish to say a word of caution to our pharmaceutical friends on the question of "maximum doses." Referring to page 213 of this number, the reader will find, in the able report of the "Committee on Papers and Queries," presented at the recent meeting of the New York State Pharmaceutical Association, a regret that certain physicians in the convention for the revision of the Pharmacopœia should have influenced the convention to decide that a posological table should not be inserted in the next edition. The writer was probably unaware of the nature of the discussion which resulted in such a decision. We will, therefore, say that the omission was advised chiefly on medico-legal grounds. However convenient such a table of maximum doses might be, it would, in many instances, not only put a stop to the prescription of an adequate dose by a physician; but, in the case of a malicious suit for malpractice, such as only recently occurred in this city, the authority of such an "official" standard would outweigh the judgment of the most eminent experts. Precisely this trouble has been met with in England, and caused the pharmacopœia to become, in a sense, a public nuisance instead of a public benefit. The truth is, that there *is* no maximum due for *any* remedy. The amount which *may* be administered depends much upon the nature of the individual case, and unless the dose is so great as to attract the attention of the pharmacist, it had better be left to the judgment of the prescriber.

It would be a wise and salutary measure if it could become customary among physicians to use some sign which would convey to the pharmacist the information that the dose prescribed was intentionally made large, but this must be brought about by quiet and persistent agitation of the subject in colleges, hospitals, societies, and journals, and not by legislation.

We have reason to suspect that pharmacists are sometimes rather hysterically over-zealous in this direction, if we may judge from reports that have reached us of late. Only a few days since, a physician received a note from a nervous patient (to whom had been given a prescription for "Fowler's Solution," together with explicit and written directions for its internal use as a remedy for a skin affection), saying that the apothecary had told him the medicine had arsenic in it, and that it needed to be taken with the greatest caution. It was only after some effort that he was persuaded to take the medicine. The doctor resolved that he would never allow another patient to take a prescription to that store, and, moreover, that he would forthwith invest in a stock of active remedies, and supply them gratis to his patients. No doubt, he will have his labor for his pains, but that is his business.

We lately received specimens of an appliance for attachment to packages containing medicines which require to be used with caution; the mere appearance of which, on the bottle of a sick woman, might either prevent her from risking the taking of the remedy at all, or subject her to such mental disturbance, in some instances, as to prejudice her case. No objection can be raised to the attachment of any appliance, label, or device, if directed by the prescriber; but, unless required by law or asked to do it, pharmacists will consult their interests, and very often the interests of their clients, if they will refrain from exciting *needless* apprehension regarding the nature of the remedy prescribed.

Already, in cities, physicians are resuming, to some extent, the practice of dispensing their own remedies, especially in the case of the very ones which common sense would lead us to suppose they would write prescriptions for, viz., the *active* remedies, since the prescription would receive the observation of some one besides themselves, and accidents be thus rendered less liable to occur. It requires only a little more agitation of the "maximum dose" question and an attempt to make it a subject for legislation to drive this class of prescriptions quite away from the pharmacist's counter.—*Verbum sat sapientis.*

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS

[ORIGINAL COMMUNICATION.]

EMULSIONS BY MEANS OF ICELAND MOSS.

BY DR. A. B. HUESTED.*

"UNDER what conditions and in what proportions does mucilage of Irish moss form stable emulsion with fixed oils?"

In this connection it does not seem improper to consider the meaning of the term emulsion. Webster defines it as "a soft liquid remedy, of a color and consistence resembling milk; any milk-like mixture prepared by uniting oil and water by means of another substance, saccharine or mucilaginous." Another definition is, "a preparation of a milky, white opaque appearance, which is composed of oil, divided and held in suspension in water by means of mucilage." Milk then seems to be taken as the standard of emulsions, and the nearer any preparation of this kind approaches this standard in all its sensible properties, the nearer does it approach perfection.

In answering this question, my experiments have been confined to cod-liver and castor oils, more especially to the former, as these are the more important in relation to medicine and pharmacy.

The first thing is the preparation of the mucilage, and in this no little difficulty was experienced in making a bright clear preparation. The following process was finally accepted as the best. Take of dry Irish moss the required amount, wash thoroughly in two or three portions of cold water, put into a suitable dish and pour upon it double the quantity of water to the mucilage required. Apply heat, gradually increasing until the boiling point is reached, continue till the moss is nearly all dissolved and the whole amount reduced to nearly one-half. While still hot pour upon a funnel-shaped wet flannel filter and allow the mucilage to drain off, not using pressure or stirring, as this will force through small particles of the moss and make it cloudy and dirty. In this manner three mucilages were prepared, representing two drachms of moss to eight, twelve and sixteen fluid ounces of finished product, designated as Nos. 1, 2, and 3. Three ounces (fluid) of glycerin were then mixed with a separate quantity of thirteen fluid ounces of each of the above, thus making six varying kinds of mucilage.

With each of these, emulsions of cod-liver oil were made, containing fifty, sixty-six, and seventy-five per cent of oil. All were manipulated and treated as nearly as possible in the same manner. When first completed they appeared equally perfect as emulsions, with no apparent difference in the size of the oil globules. Those containing fifty per cent of oil were much whiter than the rest, the color of the others growing darker and yellowish as the proportion of oil increased. There was no difference in color between those containing glycerin and those that did not. The consistence varied with the mucilage and proportion of oil. At this date, after remaining at rest and exposed to the light for three months, the following changes are apparent. The separation of a clear fluid at the bottom of the specimens, varying from $\frac{1}{16}$ to $\frac{1}{8}$ of an inch in thickness, presents itself in all of the fifty per cent preparations; while only two of the sixty-six and two of the seventy-five per cent show it at all. The surfaces of the fifty per cent specimens show no change, except the one prepared with thinnest plain mucilage. On this a few small oil globules are seen. The sixty-six per cent emulsions from plain mucilage all show oil globules at the surface, and they appear in only one of those made with glycerin mucilage. All of the seventy-five per cent emulsions have oil globules on the surface, but much more marked in those made with plain than in those with glycerin mucilage. All of the fifty per cent emulsions mix with water in any proportions, forming a milky fluid on which a cream rises after a short time. Hypophosphite salts may be combined with these in the required proportions, though sometimes, when used with those that contain no glycerin the emulsion is destroyed or changed to a soft pulpy mass; this does not take place in those that contain glycerin.

The method I have found best in making the emulsion is by agitation in a bottle, holding about one-third or one-half more than the amount desired to be made. Introduce first the mucilage, add the oil in five or six portions, shaking thoroughly between each, and until it shows a white creamy layer, with no streaks or granular appearance when thrown against the inside of the bottle and allowed to run down. Trituration in a mortar has not been successful in my hands, nor has what may be called churning.

With castor-oil the experiments have not been so numerous, yet enough to show that a mucilage mixed with glycerin is much better than plain, and also that a heavier or thicker mucilage is required than for cod-liver oil.

These preparations have all stood in bottles but two-thirds full, and as yet none have shown any tendency to decay or injurious change, except a slight mould on the surface of one. From these experiments I conclude that a mucilage made with two drachms of dry Irish moss to sixteen fluid ounces of finished product, for cod-liver oil, and the same amount of moss for about twelve ounces of finished mucilage for castor

* Paper read at the Annual Meeting of the New York State Pharmaceutical Meeting, held at Buffalo, May 18th–20th, 1881.

oil, these mixed with glycerin in the proportion previously stated, and with this make a fifty per cent emulsion of the oils, by agitation, are the best proportions and conditions by which to make Irish moss emulsions.

The combination of the glycerin with the mucilage makes the emulsion more stable in regard to oil globules appearing at the surface, also always admits of the combining of hypophosphite salts; and I prefer the thinner mucilages for the reason that the emulsions are so much more liquid and readily poured. The specimen here presented contains hypophosphites of lime and soda, eight and four grains to the ounce; has been made two months and remained undisturbed, exposed to the light. The formula used is as follows:

Take of

Mucilage No. 3 with glycerin	fl. ℥ xxx.
Cod-liver oil	O. ij.
Hypophosphite calcium	grs. 512.
" sodium	" 256.
Chloride sodium	ʒ i.
Oil of bitter almond	gtt. xl.
" wintergreen	" xvi.
" cassia	" viij.
Water	fl. ℥ ij.

Make the emulsion in the manner previously stated, rub the salts to a fine powder, add the oils, then the water, mixing well together, and pour into the emulsion, shaking thoroughly.

The specimen of castor-oil emulsion has been made two months, remained undisturbed and exposed to the light. The formula slightly differing from the preceding is:

Mucilage No. 3 with glycerin	fl. ℥ xviij.
Castor oil	fl. ℥ xxiv.
Citric acid	ʒ i.
Sugar, white	℥ xij.
Oil of bitter almond	gtt. xxx.
" wintergreen	" xij.
" cassia	" vi.

Make the emulsion as before, rub the acid and sugar to a very fine powder, add and mix the oils, then pour in the emulsion and stir well together. This has not stood well; recently the oil has begun to show at the surface and near the top in large globules. When No. 2 mucilage with glycerin is used I do not think this separation will take place. The citric acid and sugar with essential oils were added to cover the taste of the castor oil, and in the cod-oil preparations the chloride of sodium is thought by many to cover the taste and assist in the digestion of the oil.

The objections to the use of Irish moss for emulsions are the apparent inability to minutely divide the oil globules, and the labor attending its use, especially when an emulsion is to be made quickly. The first objection I have not succeeded in removing, and though a number of methods have been tried I have not been able to show any better results than the specimens present. With gum arabic for the emulsifying agent a much finer division of the oil can be very readily effected, even with no special effort.

The second objection may be much relieved if not entirely removed by preparing the mucilage, mixing with glycerin, and properly securing in bottles for use when required.

Some time since I prepared a quantity of No. 3 mucilage with glycerin and filled three bottles. These were heated in a water-bath to the boiling point, a small quantity of ether was poured on the surface of the liquid in one bottle, olive oil in a second, and to the third no addition was made. All were then corked and sealed. After three months the two containing the ether and olive oil were opened, the mucilage found to be perfectly good, and emulsions were made with them. That used with the cod-liver oil was just as it had been prepared, but for the castor oil the mucilage was evaporated to about the consistence of No. 2, then divided into two parts, and with one part was made a plain fifty-per-cent emulsion, while with the other a palatable emulsion by the process previously given. The remaining bottle has not been opened, but to all appearances is perfectly good.

This seems to demonstrate that the mucilage may be kept uninjured and good for use when required.

These experiments have all been made during the winter, in the ordinary temperature of the store, and no precautions taken to keep in a cool place. How the heat of the summer would affect them I am unable to state, but am inclined to believe that there would be no injurious results produced by it.

ALBANY, N. Y., MAY, 1881.

[ORIGINAL COMMUNICATION.]

SINGULAR BEHAVIOR OF BERBERINE TOWARDS THYMOL.

BY PROF. J. U. LLOYD.

THE fact that a liquid results by triturating together hydrate of chloral and camphor is now familiar to most pharmacists. Recently I had occasion to triturate berberine, as obtained from Hydrastis canadensis, with an equal weight of thymol. The result proved to be a viscid liquid, though both the thymol and the berberine were in the form of powder and dry. The berberine had been exposed to warm air in a drying closet, whereby most of its water of crystallization was expelled. It was made according to my process, published in the proceedings of the Amer. Pharm. Assoc. (Vol. XXVI. (1878), page 800). I state the origin of the berberine expressly, because there are doubts in my mind as to the identity of the berberine obtained from Hydrastis canadensis and that obtained from Berberis vulgaris.

The above reaction seems to be well worth investigating. There must be some chemical change, since the product readily dissolves in alcohol with a deep orange-red color, while berberine alone in alcoholic solution has a lemon-

yellow color, and is, besides, not very soluble in alcohol. Further, the product is insoluble in water, while berberine is very soluble in water. It is also partly soluble in chloroform, possesses a strong odor of thymol, and has a sharp, biting, bitter taste. The product may apparently be obtained in the form of crystals by operating in the following manner: Rub equal parts of berberine and of thymol in a mortar. To the paste which results, add 16 parts of alcohol, and filter. Evaporate the filtrate to a syrupy consistence, expose the residue to the air, and there will result a mass of crystals which seem to be neither berberine nor thymol.

The investigation of the reaction here described may furnish an interesting object of study for some theoretical chemist; and it is here published with the special view of inducing some one, who can afford to devote the time to it, to take up this subject.

CINCINNATI, OHIO.

Dodge's Dose-Measuring Bottle.

ON page 70 we gave a description and diagrammatic illustration of the dose-measuring bottle invented by James M. Dodge, of Chicago, and referred to certain modifications. In the adjoining figure, from the *Scientific American*, are shown not only the first variety, but also the two others. There is no doubt that the first (centre bottle) might be made more or less useful providing it be made for fluids not very viscid in consistence; but the others, if made of glass, appear to involve difficulties in their manufacture which would prevent their general use. We are rather curious to know whether the patentee ever succeeded in having a bottle made in the form shown on the left of the engraving, and if so, how he managed to fill it through the narrow channel in the side of the bottle which connects the upper and lower chambers. Another problem is, how the cleaning of the interior of bottles formed like the ones on the sides of the engraving could be accomplished.

[ORIGINAL COMMUNICATION.]

THE EARTHQUAKE UPON CHIOS, AND ITS EFFECTS UPON THE MASTIC-PRODUCTION.

BY PROFESSOR EUSTATHIOS PONIROPOULOS, OF ATHENS.

THE terrible catastrophe which has befallen the beautiful island of Chios is one of the most remarkable natural phenomena of this century. The whole civilized world has had its sympathies awakened, and has offered and rendered help and succor to the unhappy inhabitants. The violent shocks have more or less completely destroyed the capital city and many villages, some of which I will mention below; and not shocks alone have done this, but also sudden vast fissures and gaps made in plains and in mountainous districts. The catastrophe was frightful, not alone through the immense loss of property, but also by the great loss of life. The Greek Government promptly sent not only help and supplies for immediate use, but, besides, dispatched a Medical Commission accompanied with portable hospitals, medicines, food, garments, and other necessary articles. Large sums of money were likewise forwarded, as well as three special steamers to bring those which were badly injured to the hospitals at Athens. Besides, from all parts of Europe there soon arrived assistance in one shape or another. The distress is still appalling, and many of the poor inhabitants still roam over the island seeking for their lost friends or relations.

Regarding details, it may be said that nine-tenths of all the houses have been demolished; there are said to be from 8,000 to 10,000 dead and between 12 and 15,000 wounded, about 6,000 of them seriously and partly crippled for life. 60,000 souls were rendered houseless, without food or raiment. It is to be hoped that the philanthropy of the whole world will continue to afford assistance, and I shall gladly place myself at the disposition of any one who may intrust me with funds or supplies in aid of the sufferers.

Meanwhile let us briefly recount the catastrophe itself, which took place on April 3d–5th. The first shock, the most violent, which changed the complexion of the island in a moment, took place on April 3d, at 1.55 P.M., and lasted a little less than one minute. During this minute there was heard nothing but the frightful crash of falling buildings, the despairing cries of the unfortunates which were caught by the falling walls and debris, the agonizing plaints of the survivors, who were blinded by clouds of dust arising from the ruins, and who sought their safety in flight. At first it was impossible to appreciate the extent of the disaster. Several feebler shocks succeeded in irregular intervals and cast terror among the inhabitants who had taken refuge in the gardens and upon the heights surmounting the city, and who were at first deterred by the repeated vibrations and the subterranean noises from rendering aid to the wounded. At Aplotaria 50 persons were entombed alive; and the villages of Valvyli, Perverato, Kalimassia, Kardamina, Nenita, Vroudatos, Tholo-Potami, Daphis and Karyes lost about one-half of their inhabitants. On the next day (April 4th) at 7 P.M. a second shock occurred, which was very violent. At first there was a perpendicular vibration, from below upwards, as if the soil were violently lifted up below; next there occurred vibrations in the other direction, which threw down still standing walls; and finally there was a last most violent shock which turned everything topsy-turvy down to the foundations—and all within about fifteen seconds.

The most notable earthquakes which have occurred in Greece and its dependencies or neighboring countries are the following:

1. The earthquake of the island of Zante (*Ζάκυνθος*), in 1842, which was quite destructive.

2. The earthquake of the old city of Corinth (*Παλαιὰ Κόρινθος*), in 1858, which destroyed the city completely.

3. The earthquake of Cephalonia (*Κεφαλληνία*), in 1868, quite destructive to the city and neighboring villages.

4. The earthquake of Amphissa (*Ἄμφισσα*), in 1875.

5. The periodical earthquakes of the island of Santorine (*Θήρα*).

6. The late earthquake at Chios. This was, however, not the first time that this island was visited by such disaster. Once before, in 1620, it was agitated by shocks, though much less violent than those which lately occurred.

Let us now fix our attention upon the agricultural features of Chios. In consequence of its configuration, and its geological differences, and also its diversity of products, the island is divided into three agricultural districts, namely:

1. The District of the Mastichochoria (*Μαστιχοχώρια*).

2. The District of the Epanochoria (*Ἐπανοχώρια*).

3. The District of the Campochoria (*Καμποχώρια*).

The Mastichochoria are thus called on account of the extensive growth of the *Pistacia Terebinthus* (*πιστακία ἡ τερμινθοφόρος*), from which mastic is obtained by incisions. The annual production of the latter amounts to more than 100,000 okas, and the price varies, according to quality, between 18 and 26 drachms per oka.* The inhabitants of the villages in this district occupy themselves exclusively with the cultivation of this tree. The mastic-harvest begins generally in July and ends in September, fresh incisions being made in the trees from time to time.

The Epanochoria is the district which extends towards the north and contains only a limited number of villages.

The Campochoria is the district comprising the villages near the capital, and is very rich in agricultural products, particularly in almonds (*ἀμυγδαλέας*).

Regarding Chian Turpentine, I am happy to state that the districts where this is chiefly obtained have remained undisturbed by the earthquake, so that the production will suffer no diminution, as soon as the population has become settled again.

Following is a list of the villages commonly called Mastichochoria, together with a census of the number of families domiciled at each before the earthquake, and the effects of the latter upon some of them.

1. Saint George de Sykousis, 264 families. 2. Lithion, 100. 3. Bessa, 100. 4. Elata, 136. 5. Mesta, completely destroyed, 197 fam. 6. Olympos, completely destroyed, 118. 7. Pyrgion, 293. 8. Harmolia, 56. 9. Kalamoti, 205. 10. Patrika, 47. 11. Kini, 60. 12. Bounos, 76. 13. Phliasia, 45. 14. Neonita, completely destroyed, 226. 15. Katarrhaktis, 72. 16. Pagida, 25. 17. Exo-Didyma, 25. 18. Mesa-Didyma, 70. 19. Myrmikion, completely destroyed, 30. 20. Tholopotamon, 185. 21. Kalaimasia, completely destroyed, 290. 22. Basilioniko, destroyed, 80. 23. Chalikos, destroyed, 80.

ATHENS, GREECE, May 7th, 1881.

* 1 oka = 2.8 lbs.; 1 drachma = 19.3 cents.

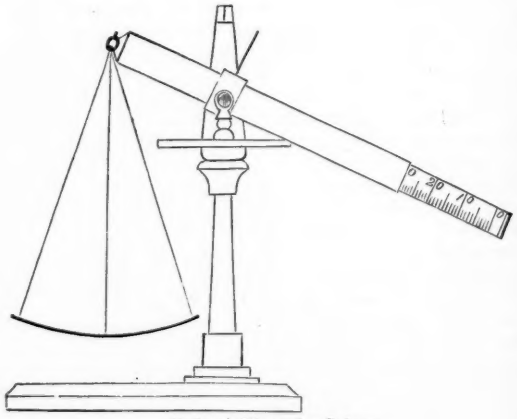
A New and Compact Suction and Pressure Apparatus.

DR. ROBERT MUENCKE, of Berlin (Louisenstrasse 58) has sent us an illustration and description of a new and very compact apparatus for producing rarefied or compressed air for use in laboratories.

If the mixture of water and air, which flows from the ordinary water-jet pumps ("rapid filters") in laboratories, is caught in a reservoir of such construction that the air may escape above, and the water below, it will be found that the air will be expelled with more or less energy, in proportion to the quantity of air carried down and to the shape and construction of the cylinder in which the mixture of air and water are allowed to separate. If the pump is so constructed that, with a consumption of 9 to 10 liters of water, it aspirates about 15 to 20 liters of air per minute, (*h* represents a style of water-valve). Near the edge of the top of the reservoir is a faucet and nipple, through which the compressed air escapes, and the water flows off below at *K*.

When using the apparatus, the joint *d* is at first screwed as far as possible into the piece *B*. Next the faucet at *g* is closed, the outlet at *k* opened, and the water turned on at *h*. The joint *d*, together with the reservoir with which it must be connected perfectly tight, is then gradually screwed downwards, until a vacuum-gauge, connected with *b* indicates the maximum of exhaustion. If the connection at *b* be now removed (that is, if air be freely admitted) the faucet at *g* be opened, and the outlet at *k* be regulated so that the water will flow off unmixed with air, and that it will maintain a constant level in the reservoir—there will be obtained a blast of air equal to ab. 22 *cm.* of mercury, as stated above. In

Muencke's Suction and Pressure Apparatus.



Gorham's Dispensing Balance.

and if it is connected with a reservoir of proper size, there will be obtained a blast of compressed air, which, when issuing from a jet of 2 *mm.* in diameter, and with a water-pressure of 2 to 3 atmospheres, equals a column of mercury of 22 *cm.*, and therefore is sufficiently strong to supply a large blast-lamp.

The complete apparatus consists, in general, of two main portions; namely, the pump *B*, and the reservoir *A*. The pump itself consists of three pieces, *B*, *c*, *d*, adjustable by screws, of which the upper part, *B* contains the upper cone of the water-jet, and also the lateral tube *b*, for conveying the aspirated air. *B* is connected with the stuffing-box *c*, which may be screwed higher and lower, and in which the tube *d*, containing the lower cone, is likewise adjustable by screw-thread. The pump is screwed, by means of the nut *e*, centrally upon the top of the reservoir *A*, while its upper end is connected, by means of a rubber-tube *aa* with the water-supply order to prevent a projection of water from the tube *b*, at the time of setting the apparatus at rest, it is necessary to turn off the water-supply at *h* very gradually.

When using the apparatus as an aspirator, it is absolutely necessary to keep the faucet *g* closed, and to always turn off the connection between the pump and the rarefied vessel, before shutting off the water.

The price of the apparatus as shown in the cut is 27.50 *marks;* provided with additional fittings, such as vacuum-gage, pressure-gauge, etc., the prices are 30, 40, 42.50, and 57.50 marks. There is also a more simple kind, only intended for a blast which costs 10 and 11 marks.

Tubular Dispensing Balance.

DR. JOHN GORHAM, of Tunbridge, England, suggests a form of balance for prescription purposes, in which a rod or tube sliding within a tubular arm replaces an external movable weight.

The adjoining diagram from the *British Med. Journ.*, of April 9th, sufficiently explains its form and mode of operation.

On the Poisonous Constituents and the Oils contained in Japanese Star-Anise.*

BY PROF. J. F. EYKMAN, OF THE UNIVERSITY OF TOKIO.

ILLICIUM RELIGIOSUM v. Sieb. (Japanese: *shikimi-no-ki*) is a plant belonging to the sub. ord Wintereæ (*Brown;* nat. fam. Magnoliaceæ), growing wild in Japan, and has always been regarded by Japanese and Chinese as poisonous. During the past year several cases of poisoning by commercial star-anise have occurred in Leeuwarden (Netherlands), which were referred by an investigating committee to the probable employment of the Japanese star-anise. Though the committee attempted to obtain a definite poisonous substance from the fruits, it failed to do so, but it found the following as being the chief constituents of the two kinds of star-anise:

	True Star-anise.	*Suspicious Star-anise.*
Extract	11.5 %	16.0 %
Green fatty oil	3.8 %	3.1 %
Resin insoluble in ether	6.65 %	11.9 %

Both kinds of star-anise yielded evidence, by the general method of Stas and of Dragendorff, of the existence of an alkaloid, which, however, was not further examined.

The chief symptoms of poisoning from spurious star-anise observed in dogs were irritation of the stomach, accompanied by vomiting and sometimes by diarrhœa. Injections of the extract were mostly fatal to frogs; in rabbits, the symptoms were: shaking of the head, inquietude, occasionally rotary movements, acceleration of respiration, irregular beating of heart, clonic convulsions, particularly in the hind legs, then paresis of the latter, and finally death.

Several other cases of alleged poisoning by star-anise have lately been reported; one of these occurred in Japan, in which five children were attacked, three of whom died. This occurrence induced the sanitary authorities of Japan to request Prof. Eykman to examine the *shikimi* seeds and to try and isolate the poisonous substance.

Accordingly, Prof. Eykman first examined the essential oil, since he could not at once obtain specimens of the fruit or seed itself.

The essential oil was prepared by distilling about forty kilos of fresh leaves, by cohobation with steam. The yield was 177 gm. or 0.44%. It strongly refracted light, was almost colorless and pale-yellowish, turning darker on keeping, In water it separated into a heavier and a lighter portion. Its spec. gr. was 1.006 at 16.5° C. The odor differed from ordinary oil of anise and oil of star-anise, but is difficult to describe. It somewhat recalls that of laurel, camphor, cajuput and nutmeg, but not that of pepper as has been asserted by some authors. On cooling, even to −20° C., no separation of stearopten took place. Its molecular rotary power was determined by Hoffmann's polarimeter as $[\alpha]_D = -8.6°$. By repeated fractional distillation of 50 gm. of the oil, about one-fourth of it was obtained in form of a terpene boiling at 173°–176° C. and having a spec. gr. of 0.855, and becoming viscid with dry hydrochloric acid gas, but not solidifying. Another fourth was obtained as anethol, boiling at 231–233°, with a spec. gr. of 1.048 at 12° C., and recognized by its other properties and reactions.

Ethereal oil of *shikimi* is miscible in all proportions with absolute alcohol, chloroform, benzol, glacial acetic acid, carbon disulphide and fatty oils. In petroleum ether (boiling point up to 58° C.) it is less soluble and of 75 per cent alcohol it requires 5½ times its volume for solution.

The differences between the ethereal oil of Japanese star-anise, ordinary oil of anise, oil of fennel, and ordinary oil of star-anise, are shown in the following table (see next page).

Physiological experiments showed that, while the essential oil was poisonous in large doses, yet the same is the case with common oil of anise, only perhaps to a somewhat slighter degree. At all events, the deleterious effects of small quantities of star-anise seeds cannot be ascribed directly to the essential oil.

The author next examined the fixed oil of the seeds, which he isolated by treating the latter with petroleum-ether. The seeds, deprived of testa, yielded 52.02%; with the testa, the yield was 30.5%. The oil was clear, without special odor, viscid, and of a pale-yellow color, which disappeared almost entirely on warming. Spec. gr. 0.919 at 16.5° C. Soluble in all proportions in petroleum ether, chloroform, ether, benzol and carbon disulphide; very little in cold absolute alcohol and glacial acetic acid; soluble in 15 parts boiling absolute alcohol and about 2.5 parts of boiling glacial acetic acid. Cooled to 0° C. it shows no signs of solidification; becomes opaque at −7° C., and at −20° C. assumes the consistence of butter. It is a non-drying oil. Strong nitric acid or a mixture of equal parts of sulphuric and nitric acids produce no change of color; but nitric acid containing nitrous assumes a fine red color on being shaken with the oil.

Physiological experiments showed the fatty oil to be free from poisonous properties.

The author therefore concludes that the toxic properties of the fatty oil previously examined by Geerts were probably due to the accidental presence of some of the really poisonous constituent, which had passed into the oil during the process of preparation by warm pressing.

* Abstract of the following: *Ueber den giftigen Bestandtheil, das ætherische und das fette Oel von Illicium religiosum v. Sieb.* Von J. F. Eykman. (Reprint from the "*Mittheilung der Deutschen Gesellschaft f. Natur- und Völkerkunde Ostasiens,*" No. 23. 4to, Yokohama, 1881.) Received from the author.

It remained now to examine the powdered seeds deprived of their oil. They were macerated in a displacement tube, with alcohol of 75% containing 1% of acetic acid, and afterwards percolated with 75% alcohol. The exhausted seeds were found to be inert, but a portion of the percolate, corresponding to 2 gm. of the powdered seeds, produced strong toxic effects in a dog. The percolate was next precipitated with acetate of lead and it was found that the lead-precipitate contained a tannin, analogous to the chestnut or krameria tannin, but did not contain any of the toxic substance. A larger remaining quantity of the seeds (2½ kilos.) previously deprived of oil by petroleum ether was now percolated as above, the percolate evaporated, the resulting extract warmed with a little glacial acetic acid and afterwards mixed with chloroform until the latter ceased to separate anything, after which the chloroformic solution was filtered off. This was repeated several times, the chloroformic solutions united and distilled, when an amorphous yellow residue was obtained which was proved to contain the toxic substance. As the latter was soluble in water, the amorphous residue was extracted with a little water, whereby a good deal of insoluble matter was left behind. After filtration, the liquid was repeatedly shaken with petroleum ether, then mixed with potassium carbonate and shaken with chloroform. On evaporation of the latter an amorphous, but slightly yellow residue was left behind. A few small samples of this, moistened with dilute mineral acid and allowed to stand, separated microscopic crystals, among which were rhombic plates (see fig. 8). In another sample the form of crystals shown in fig. 9 (see p. 202) was obtained The rest of the substance was treated with hydrochloric acid, and the separated crystals further purified. The pure substance finally obtained was found to be a powerful poison, giving the following symptoms when administered to a young dog:

After ten minutes: Inquietude, strong barking, turning of head and tongue, the mouth being open; scratching at the region of stomach and chest with the hind legs; apathy.

After fifteen minutes: Violent cramps of the abdominal muscles with inclination to vomiting, tetanic convulsions with simultaneous stretching of the four extremities, strong flexion of the head upon the back and spasmodic opening of the mouth, vomiting of brown phlegm, gliding forward, sudden horizontal turning of the whole body, strong convulsions in the extremities, then paralysis, finally collapse, and death after three hours.

The proximate principle isolated by the author, to which he provisionally gives the name *sikimine*, appears in hard, heavy crystals, difficultly soluble in cold, more readily in hot water, ether and chloroform, easily soluble in alcohol and glacial acetic acid, insoluble in petroleum ether, and scarcely more soluble in alkalies than in water. It is not a glucoside nor does it separate glucose after boiling with dil. sulph.

	COMMON OIL OF ANISE.	COMMON OIL OF FENNEL.	COMMON OIL OF STAR-ANISE.	OIL OF JAPANESE STAR-ANISE.
Constituents.....	Chiefly solid and liquid anethol.	A little terpene boiling at 190° C.; solid and liquid anethol.	Chiefly solid and liquid anethol.	A good deal of a terpene boiling at 173–176° C. Liquid anethol boil. at 232–233° C.
Melting point.....	+6° to 18° C.	−2 to +18° C.	ab. 0° C.	Does not solidify at −20°C.
Specific gravity.....	ab. 0.993.	0.940–0.998.	0.978.	1.006.
Molecular rotation.....	0° to +0.5°.	+13° to +19.5°.	0° to −0.4°.	−8.6°.
Alcoholic hydrochloric acid	Colorless, afterwards reddish, then pale-red.	Colorless.	Colorless.	Colorless; afterwards blue.
Chloral-reagent *.....	Colorless, then yellow and brownish.	Colorless, then finely red.	Colorless, then finely red.	Colorless; afterward dirty brown-yellow.
Ammoniacal nitrate of silver.	No reduction in 24 hours.	No reduction in 24 hours.	No reduction in 24 hours.	Reduction in a few hours.
Hager's reaction (6 drops of the oil and 30 drops sulphur. acid mixed. When cold, 10 cc. of 90% alcohol are added).	A portion of the mixture of sulphur. acid and oil remains as a thick mass adhering to test-tube and insoluble in alcohol.	Mixture of oil, sulphuric acid, and alcohol is perfectly clear.	Same as with common oil of anise.	Mixture is nearly clear; a small reddish-white sediment separates.
10 drops of oil with 60 drops of ether and ab. 1.5 gm. of sodium.	Colorless; after 4 hours the liquid is nearly colorless. Sediment yellowish-white.	——	Colorless; after 4 hours the liquid and sediment are yellow.	Colorless, soon turning bluish; after 4 hours the liquid is pale-yellow, sediment yellow.

* Impure chloral-hydrate, having the property of striking with oil of peppermint an intense currant-red color (Dragendorff).—ED. N. R.

acid. A small sample tested for nitrogen gave negative results.

The question whether the Japanese species of star-anise (*Illicium religiosum* Sieb.) and the Cochin-Chinese species (*Illicium anisatum* Loureiro) are identical, has been repeatedly debated, but a final decision will probably not be arrived at until fresh authentic specimens of the latter species have again been obtained and more carefully examined.*

For the present the following account of the two plants may suffice :

JAPANESE STAR-ANISE: *Illicium religiosum* Sieb. (1837), = *Illicium Japonicum* Sieb. (1825). *Illicium anisatum* L. — Japanese: *shikimi-no-ki ; hana shikimi* (shikimi, also written sikimi, skimi, appears to be derived from ashikimi, or "evil fruit"); *moso* "mad weed" = (Chinese: *mang-tsao*). According to Iwasaki Jose, author of the Honzo Zofu, it is also called *hana-no-ki* (in the province of Harima), and *koshi-ba* (in the province of Enshu = Totomi). According to Yamamoto Boyo, author of the Hiakushinko ("description of one hundred drugs"), both the Japanese and the Chinese species are called *dai-ui-kio*. And according to Ito Keisuke it is also called *iririshi-ya-mu*.

The plant was introduced in Japan in very early times by Chinese Buddhistic priests from China and perhaps also from Corea. It is still regarded as a sacred plant, hence it is frequently planted near Buddhistic temples and placed in vases during religious festivals. It is also found near graves, which custom may perhaps be traced to its reputed property of being able to keep insects, etc., from the dead. At present it is found all over Japan.

The powder of the bark and leaves is used in long, thin, cylindrical pastiles (*sen-ko*), for fumigation in temples and at religious ceremonies. In former times, such straight or circular cylindrical pieces, which when ignited burn very regularly, were used as a measure of time.

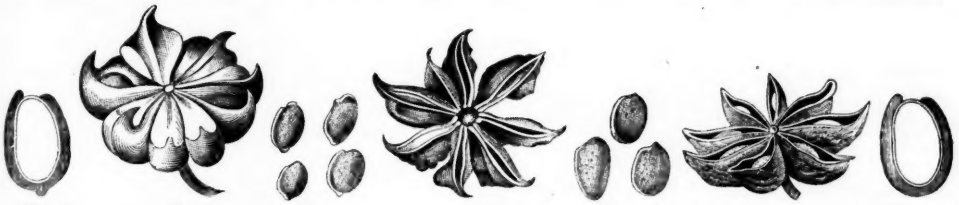


FIG. 6. FIG. 1. FIG. 4. FIG. 2. FIG. 5. FIG. 3. FIG. 7.

FIG. 1.—Unripe fruit of *Illicium religiosum* Sieb. Nat. size.
FIG. 2.—Ripe fruit of *Illicium religiosun*. Nat. size.
FIG. 3.—Ripe fruit of *Illicium anisatum* Lour. Nat. size.
FIG. 4.—Seed of *Illicium religiosum* Sieb. Nat. size.
FIG. 5.—Seed of *Illicium anisatum* Lour. Nat. size.
FIG. 6.—Section of Seeds of *Illicium religiosum* Sieb. Double nat size.
FIG. 7.—Section of seeds of *Illicium anisatum* Lour. Double nat. size.

The plant grows to a height of six to twenty feet. Its leaves are shortly (ab. 1 *cm.*) petioled, coriaceous and thick, feeling like wax, evergreen, oblongly-ovate or obovate, entire, glabrous, and ab. 7 *cm.* long and 3–4 *cm.* broad. The flowers open about April. The corolla is greenish or faintly yellowish-white and has a waxy appearance; petals 12 to 20; stamens 15–20. The fruit consists of ab. 8 circularly arranged carpels, being altogether ab. 2 to 3 *cm.* in diameter, and ab. 0.5 *cm.* high. Each carpel is provided, above, with the residuary pistil. While unripe, the fruit (fig. 1) is green, juicy, and contains much ethereal oil. During ripening, about the fall, the fruits dry quickly, particularly on the back, shrivel up and become brownish-red. When fully ripe, the carpels open along the radial dehiscence, and the seeds are sometimes projected with considerable violence.

The bark of the plant or tree has an aromatic, rather agreeable odor; the fruits, however, are less aromatic and have a repulsive taste. The leaves have the same odor as the ethereal oil which they contain.

All parts of the plant, and particularly the fruit, are regarded as poisonous by the Japanese.

The shikimi-no-ki is also found in China where it is called mang-tsao ("mad-weed"). The different parts of the plant are used for the same purposes as in Japan. According to the Pun-tsao-kang-mu, the dried leaves, mixed with rice or barley flour, are used for killing fish which are thereby not rendered injurious to eat.

OFFICINAL STAR-ANISE. *Illicium anisatum* Loureiro. *Anisum peregrinum* Bauh.

Chinese: *hwai hiang* (Jap. *kai-ko*); *pah-ko-hwui-hiang* (Jap. *hakkaku-ui-kio*, "octagonal anise"); *ta hwui hiang* (Jap. dai-ui-kio, "great anise," as a distinction from sho-ui-kio "small anise," which is *Fœniculum vulgare* or *Anethum graveolens* (Jap. inondo; Chin. jira). In Japan the true star-anise is also called *haku-ui-kio* "ship (= foreign) anise."

This plant is a native of Cochin-China, Siam, and the south-western provinces of China, as Yun-nan. According to Rondot,* the best kind

* It is well known that Loureiro, an Augustine padre, who published a flora of Cochin-China, has committed numerous blunders, both by faulty or unauthenticated descriptions, and by a reckless establishment of new genera.—ED. N. R.

* Commerce d'exportation de la Chine, 1848, p. ii.—ED. N. R.

is brought from Foukien * to Canton, and from there exported by way of Tsiouen-tchou-fou. It is also collected in Kiang-si and Kuang-tung.

The plant is but little known as yet. Loureiro states that it is smaller than the Japanese species, has smaller and more oval leaves, not pointed, but rounded at both ends, and has a larger number of stamens.

Various criteria have been given by different authorities, to distinguish the true from the Japanese star-anise.† Among them is the shape of the point of the carpels, which is mostly described as being strongly curved upwards in the latter. But Prof. Eykman found that in many instances the carpels of the Japanese star-anise were not curved backwards, and also, that the carpels of some of the true Cochin-Chinese star-anise were sometimes curved in this manner. The author further states that, while there may perhaps be sufficient difference both in the shape and in the odor and taste to distinguish Japanese star-anise when mixed with the common, yet the differences are not so decisive as to permit the settlement of the question of the identity of the two plants.‡

For the present we must content ourselves to pronounce Japanese star-anise as a poisonous—perhaps only more poisonous—variety of *Illicium anisatum* Loureiro.

In general, the following characteristics may be noted for distinguishing the two drugs:

Genuine Star-anise.	*Shikimi Fruits.*
Taste, sweet and anise-like.	Taste, disagreeable and not sweet or anise-like.
Odor, faintly like anise.	Odor, different from anise, faintly resembling laurel, camphor and nutmeg.
Somewhat larger than shikimi fruits. Surface more corklike, points short, horizontal or slightly curved upwards, further separated, carpels less woody, shrunken and wrinkled. Seeds, mostly dark-brown with rounded point.	Somewhat smaller than true star-anise. Surface more shining and red-brown, points thin, often strongly curved upwards, carpels more woody, greatly shrunken and wrinkled. Seeds, mostly yellowish-brown, with strong raphe and elevated point.

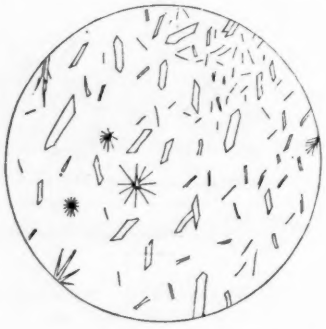


FIG. 8.

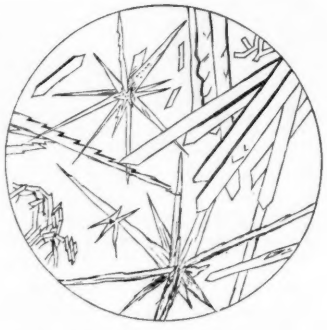


FIG. 9.

FIGS. 8 and 9.—Crystals of Sikimine.

Pepsin.

MR. W. A. WRENN, of Messrs. Wright, Layman and Umney's laboratory, in a paper on the nature of various pepsins, published in the *Chemist and Druggist* of May, recommends the following method for preparing pepsin: Make an infusion of the mucous membranes of fresh stomachs, cutting them into the minutest portions. (And here let me state that most pepsin can be obtained from the stomach of an animal that has been kept from partaking of any food for at least six hours previous to its death.) I use distilled water, and macerate for several days with frequent agitation, then set aside for twenty-four hours, in order to allow the pieces of membrane to settle; draw off the clear liquid, and to it add an equal bulk of a saturated solution of sodium chloride. Let the mixture now stand for six hours, and the pepsin will separate, and be found floating upon the surface; skim it off by the aid of a small strainer, in the same manner as cream is separated from milk; place it on a calico filter, and if bleached calico be used let it be well scalded. When the precipitate has well drained, remove it to a fresh piece of calico, and apply strong pressure; dissolve the pressed pepsin in distilled water, and now add alcohol, which will re-precipitate it; drain

* According to Hirth du Frênes, the real home of Star-anise are the border districts of Annam, Kuang-tung, and Kuang-hsi. See NEW REM., 1887, 181.

† Compare our last number, pp. 179.

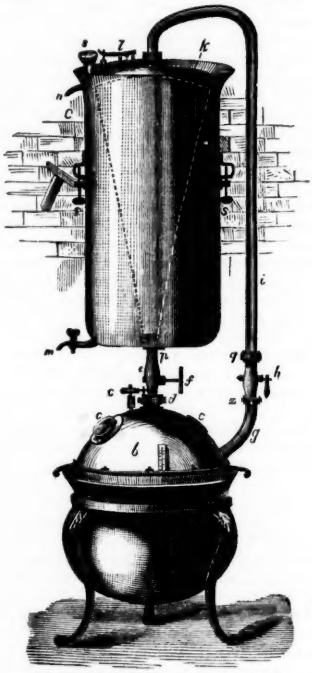
‡ Prof. Theodore Huseman, in an article in the *Pharm. Handelsblatt*, No. 2, draws attention to the American species of *Illicium* (*I. floridanum* Ellis), the fruit of which has 13 carpels, and the leaves of which are reputed to be poisonous in Alabama, whence the plant has received the name "poison bay." The fruit has an odor resembling that of anise. Another American species is *Illicium parviflorum* Mich., chiefly found in Georgia and the Carolinas, the fruit of which has 8 short-curved carpels, and is thus very nearly allied to *Illicium anisatum*. It is even found, under this name, occasionally in European gardens. The fruit of this species has a sassafras-like odor.

It would be of interest to examine our American species for their constituents.—ED. N. R.

and press before, air dry, and then carefully dry by means of a water-bath, at a temperature not much exceeding 90° Fahr., and reduce the product to a fine powder. Pepsin can be thus obtained as nearly in a state of purity as possible.

Extraction Apparatus.

In the Laboratory of the Purveying Department of the Austrian Army the apparatus here described and figured * is used for the preparation of extracts or whenever a continuous displacement by means of volatile liquids is required. It consists of an oval copper boiler, made of two halves, the lower one of which sits in a steam or water-bath, while the upper half contains two small circular windows through



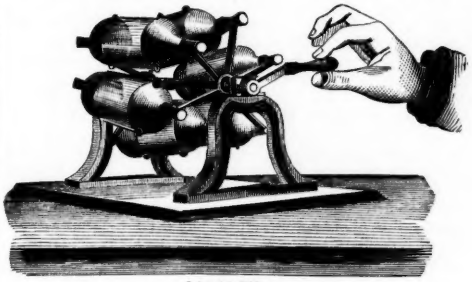
Bernatzik's Extraction Apparatus.

which the contents may be observed. In the centre of the upper disk is fastened a tube, provided with a stop-cock, and the tube is connected with the displacement apparatus, which is partially supported by clamps fastened to a bracket in the wall. This apparatus contains a long conical percolator, indicated by the dotted lines, which is charged with the material to be exhausted. On the outside of the percolator cold water is made constantly to circulate, to condense the vapors of the volatile liquid. A safety valve, *l*, on top of the apparatus guards against any possible danger from too high a pressure. When the substance is exhausted, the two faucets *f* and *h* are closed, and the opening at *o*, previously closed with a stop-cock, is connected with a Liebig's condenser, when the volatile liquid still contained in the apparatus is recovered for future use.

* Dr. W. Bernatzik, *Commentar z. Oest. Militär-Pharm.* 8vo, Wien, 1874, p. 191.

A Liquid Mixer.

Whenever it becomes necessary to use protracted agitation for the intimate mixture of certain liquids, as for instance in making perfume-extracts from pomades, etc., the labor may be greatly relieved by the use of a mixing apparatus such as that here illustrated.* It consists of a series of cylinders, situated in a framework revolvable about its axis, and so placed that their longitutinal axes are not parallel to the main axis of the frame. In consequence of this the contents of the different cylinders are thrown backwards and forwards when the apparatus is turned, and if care is taken that the cylinders are tightly closed, a great deal of time and labor



Liquid Mixer.

is saved in this manner. This apparatus has been invented by Burnet of Paris.

* From *Heinr. Hirzel*, Toiletten-Chemie. 8vo, Leipzig, 1874, p. 534.

The Orchid-Craze.—Talk about the tulip mania! or the old furniture craze! or the large investments in old crockery! These sink into something like insignificance compared with the passion for orchids developed in England. One day this month, Mr. Stevens sold at auction a collection of orchids formed by Mr. Day, of Tottenham. Just read the prices obtained: The Cattleya labiata autumn variety with three leaves and having a seed pod fertilized with pollen from Cattleya exoniensis, 40 guineas; Cypripedium Stonei, one strong old growth of seven leaves, 120 guineas; Vanda insignis, true species, eight leaves, 34 guineas; Cypripedium Spicerianum, with three strong growths, 42 guineas. Then there was an orchid with the particularly long title of Oncidium ornithorynchum album, which brought 36 guineas—nearly a guinea for every letter of the plant's name.

A Galveston darkey rushed into a doctor's office the other day and exclaimed breathlessly, "Come on, doctor, right off! Dar is somebody in my house who is in an awful fix—laid up in bed a-groanin' and a-groanin'!" "Who is it?" "It's me. You see, boss, I didn't hab nobody to send, so I come myself."

What is the moon good for?" asked Professor Miller; "what are its principal uses?" And the smart, bad boy looked up from the foot of the class and said: "To rest the gas companies."

RECENT PAPERS.

Nostrums in their Relations to the Public Health.*

BY ALBERT B. PRESCOTT, M.D., F.C.S.,

Professor of Applied Chemistry in the University of Michigan.

THIS is a class of articles, risen into importance in this generation, and already of very extensive consumption, articles which are not food, but are taken into the body, and therefore concern the welfare of the body and the vigor of the commonwealth. These articles are everywhere presented to individuals for the restoration of health, but they are not defined or described in any of the books or schools of medicine, they receive no supervision from any organized body of learning, no direction from any responsible authority. Nothing can be found out about them from any established sources of information; none of the associations of commerce or industry or science take charge of them, and, as they closely relate to the health of the public, it is certainly right that Boards of Health should have some care for them.

In common and indefinite parlance they are known as "patent medicines," but only a few of them are in fact patented. If they were held under rights patent, the records of the patent office at Washington would reveal their composition, to such as would take the trouble for the search. Their titles or trade-marks are usually secured under copyright; but the titles seldom give any serviceable information of their constituents. They are spoken of as "proprietary articles," each one being presented on the authority of some person as its owner. The fact of individual ownership is to their credit just so far as their proprietors are held responsible to their consumers, but for the most part they are issued by men unknown to the public and nowhere having reputation for competence in the treatment of the human system for disease. Honorable men are engaged in their sale, and good men may be employed in their manufacture, but these persons are not legally responsible for the good faith of the manufacturers. Certain of their proprietors have an abundant financial responsibility, and yet, whatever may be the reason for it, not one of them appears to be actually held as accountable in money or in person for any degree of correctness in his published statements as to the contents of the articles which he sells to be taken into the human body. Physicians are now and then brought into court on charges of malpractice, but the proprietors of special medicines are quite beyond the probability of prosecution. The one feature of this class of articles which more than any other compels our attention is that of their concealed composition. They are put up in packages *not marked with the names of the substances they contain, but with the names of the diseases they are to be used for.* They may be term d nostrums. A nostrum is defined by Webster as "*a medicine, the ingredients of which are kept secret* for the purpose of restricting the profits of sale to the inventor or proprietor." It does not matter what purpose the proprietor has in trying to keep a secret of the ingredients; it only matters to the public that the article is presented without a fair and simple statement of the things that are in it.

Now to what extent are the so-called "patent medicines" consumed in the United States, in the State of Michigan, in the civilized world? In the absence of statistics, an estimate sufficient for present considerations may be asked of any person who walks abroad in these days. A few years ago, an inquirer drew the conclusion† that about eighty million dollars worth are annually sold in the United States, this being at the rate of two dollars for each man woman and child in our country. This may be below the true estimate. But it is an outlay exceeding that for some things in which we are held to be liberal. For the salaries of all the teachers in all the public schools of this proud State of Michigan the yearly payment amounts to but one dollar and thirty-two cents for each inhabitant. The total expenses in the public schools of the United States do not require payment of over two dollars from each inhabitant. We may claim, then, an equal liberality toward public schools and patent medicines, with partiality toward neither. In England, in 1879, the stamp tax on nostrums was two-thirds of a million of dollars. In Germany, although the law has undertaken to restrict or prohibit them, they are sold in immense quantities, American nostrums competing sharply with those of the *Vaterland.* In spite of regulations by the French Government, Paris is a centre of trade in the nostrums of the world. Russia is plagued with them, and licenses a part and prohibits the rest. The Swiss Federation has been trying to prohibit the sale or advertisement of medicines of secret composition. Belgium is setting about to prohibit their importation; she will not tolerate humbugs of foreign origin. The United States taxes them. A single proprietor, perhaps not the most extensive, has paid our government $120,000 per annum for stamps to put upon the nostrums of his own production. At retail, then, the people paid three million dollars a year for this man's wares, and his own annual income was not far from one million dollars. This amount equals the average net income of a railroad three hundred and eighty-four miles long, in the United States, in the year for which this comparison was made. There are extensive wholesale dealers in "patent medicines" alone, and the catalogue of a single house has included fifteen hundred kinds of nostrums. No small share of the trade of the fifteen thousand drug stores, and of a considerable number of grocery stores, in the United States, consists in the sales of nostrums, and yet a single "patent medicine king" may make as much net profit in a fortunate year as all the retail drug stores in a city like Detroit, with their patient service of filling prescriptions by day and night, and with their paltry commissions on the nostrums included. How much is paid for advertising nostrums, who can tell? Some one has said over ten million of dollars a year. Enough to give over twenty universities of the first class, with free instruction, a better support than Harvard possesses. You have a piece of property to sell, or a legitimate and thriving business to cultivate, and you advertise it liberally in one or two of your local papers, but a man who is putting a pill on the market will fill up a larger space than yours, and his advertisement will be spread out in the newspapers of every city in the country,—his paltry tokens will be displayed along the dead walls of a hundred thoroughfares,—the types may be already setting up translations of his bragadocio in the newspapers of other nations.

But what is the actual, average nature of the nostrums of the civilized world, to take them as they really are—in nothing to extenuate, nor set down aught in malice—what is their power upon the body, and their influence upon the health of the people at large? We limit our inquiry to such as are distinctively nostrums—that is bearing no practically true statement of their constituents, and we must of course depend upon the results of chemical analysis for our information of the substances that are in them.

We will begin with "Pain Killers," one of the most harmless kinds, because chiefly of external application. Few of them are wholly inert and most of them have a transient stimulant effect. Of *eight* of them, subjected to analysis, six were found to contain the ordinary spirit of camphor, which every thoughtful mother keeps in the house, three contained ammonia, such as any hartshorn bottle would furnish, four were charged with red pepper, all had some alcohol,—oil of sassafras was found in four of them, oil of turpentine in two of them, tincture of guaiac in two, chloroform in one and myrrh in one. One of the most successful contained, in a half-dollar bottle, one and a half fluid ounces of soapliniment, with one-half

* A paper read at the State Sanitary Convention at Battle Creek, March 30th, 1881. Reprinted from the May (1881) number of *The Physician and Surgeon*, Ann Arbor, Michigan.

† Dr. R. W. Murphy: *Pacific Medical and Surgical Journal*, May, 1874.

fluid ounce, each, of capsicum tincture, ammonia water, and alcohol,—in all, four articles of the United States Pharmacopœia. One that was sold at a dollar for a four-ounce bottle, by a Chinese doctor, who had studied many years in the Celestial Kingdom, and who visited the towns of Michigan in a gorgeous car drawn by four horses, with a company of musicians and a lecturer, consisted of camphor spirit, lavender compound spirit, ammonia water, sassafras oil, and alcohol. One made and sold in Germany, as Nature's Own Cure, a sure relief for one hundred and sixty-six different diseases, consists of red pepper tincture, ammonia, and alcohol. Another, noticed since grouping the eight articles, is a Five-Minute Fragrant Pain Curer that will quiet every ache within five minutes by an exact time-piece. It is a mixture of ether, glycerin, common salt, and water. A Golden Wonder, or Seven Seals, for all the ills liable to occur in this life, is a mixture of ether, chloroform, camphor, peppermint oil, red pepper, and alcohol. Nearly all of these articles are directed to be taken internally, as well as applied externally. Now almost every person would have some judgment as to how much of ammonia, or turpentine, or camphor, or ether, or strong alcohol, it would be safe to take at once, if to be taken at all in seeking relief from a violent pain, but what judgment can anybody have as to a safe quantity of such talismanic articles as "ready relief," "wizard oil," or "magic master of misery?"

A class of nostrums finding considerable sale in Michigan, is the line of Ague-cures. Of *six* of these, collected and analyzed in this State, five were found to contain the cheaper alkaloids of Peruvian Bark, that is, the medicinal principles accompanying quinine, and of similar effect, but held in less esteem, so that they are separated from quinine and sold at a much lower price. Red pepper was found in two, aromatic sulphuric acid in two, molasses or syrup in five, and wintergreen oil in one. One consisted of a thin mixture of powdered charcoal, the tincture of chloride of iron, and syrup. These articles were all extended especially to those who had found injury instead of relief from the taking of quinine and other preparations of the bark, and each was published as a new discovery.

The hopeless diseases—those dread afflictions that find no cure in the resources of science and no positive encouragement from the honest physician—furnish a tempting field to the nostrum vendor. The Promissory Cures for Epilepsy are very numerous. Of those analyzed by myself, for some years, the greater number have consisted of various disguised forms of bromide of potassium,—the common remedy for palliation of epilepsy, and one familiar to almost every epileptic and his friends. The last instance that came to hand had a little red bitter-bark, common cinchona, in fine powder, mixed with the water-solution of the bromide. The sufferer found so much relief from it that he got it analyzed so as to obtain it without paying such an excessive price as was charged for it, but the result of the analysis is likely to lessen his confidence in it. In a German report of the analyses of *nineteen* articles sold to the people for epilepsy, only four were found to contain the bromide of potassium; six contained various miscellaneous ingredients, mostly vegetable, and of little or no effect of any kind, and nine were wholly trivial and inert. One of the latter was a red-colored spirit of camphor; another was a powder of roasted acorns; another an amulet of certain seeds quilted in cotton to wear about the neck. It is noticeable that four of these articles—steadily sold for years under the same name and with the same declarations, had yet undergone an entire change of composition. In one case, a powder which had maintained a steady reputation for relief of epilepsy during seventy years had been changed in its composition three times, the only constant constituent being the volatile oil of cajuput, by which it was scented. At one time it contained magnesia; during two changes it retained muriate of ammonia; and for a long while contained valerian root.

It is hardly probable that a single purchaser for any of these articles—all held at prices a hundred times above their cost—would have taken them if knowing their composition. But in the uncertainty of the unknown, in the vague and imaginary possibilities of the hidden, perhaps in a misdirection of the instinctive appeal of the distressed to the supernatural for relief and restoration, the fancy of the poor and well-nigh desperate victim of an obstinate malady clings to the irrational assumptions and specious promises of the craftily worded advertisement, as to the very spectre of a chance, for recovery. Just as men driven to straits will put their last pittance into the lottery instead of the savings bank, or as men find in their natures a temptation to venture their prospects at the gaming table, or as harassed persons in critical times turn to the fortune-teller; so, with the excuse of bodily prostration and nervous restlessness against his own better judgment, and suffering with a glimmering apprehension of the wholly unscrupulous character of the human harpies who practise on his credulity, the sick man tries one game of chance among *the unknown remedies*, and tries again, one more, and tries one after another. But mark you, here is a difference: the lottery-wheel, the gaming table, and the fortune-teller are fully outlawed by the common intelligence of the times, and their victims are few; but, on the other hand, the miracle-promising panaceas are not fully discarded by the current thought of the people, and their victims are very many.

Probably the most extreme illustration of what may be called the tragical side of the nostrum business is to be found in an uncovered view of the operations of the "cures for the opium habit." The writer has analyzed enough of these, and read enough of the feverish correspondence of their victims. In almost all cases the articles consist wholly of morphine, disguised in colored and flavored solution. In a few cases, quinine or cinchonidine, as a tonic, is substituted for a part and at times for all of the morphine. The strength of the solution, for the same patient, changes from time to time, and changes of the tonics have been found. The operator advertises, with reserve, little more than the words OPIUM HABIT, *cure*, and his address. To inquirers, he invites a letter from the opium-taker himself. When he gets this he is ready. He sends a highly wrought pamphlet, with vivid portraiture of the power and pains of the habit, made up from the most morbid literature of this subject, intensified by narrations of the wildest experience, and toned with the most assuring sympathy. It would be enough to drive a susceptible person into the opium habit just to read it. Those who are but slightly addicted to opium, or invalids just beginning to depend on it, take on the impression that they are hopelessly enslaved. But the promise of cure is certain, and the certificates enough to prove charcoal to be white. The remedy is costly, but it is ordered. It comes in fixed quantity to last exactly thirty days, with most positive instructions to take just the required doses of the mysterious liquid, under penalty of great danger from any variation. The patient, for such he is called, begins. At first he is rejoiced that he can do without his morphine, then suspects that there is morphine in the unknown medicine and demands explanations, and makes complaints. Constant correspondence is insisted on, frankness required, and every doubt is met with decision. So the pathetic farce is protracted; on the one side, art and audacity and cold, merciless persistence, on the other side alarm and hesitation and despairing appeals, until the judgment of friends or the service of an analyst dispels the illusion, and leaves the victim to realize that he is sold to his own habit by the one whom he engaged to defend himself against it. Whether the autocrat of the opium antidote ever uses his control to diminish the supply of the narcotic, and weaken the habit, cannot be positively declared, but such cases have not been found. And for this nostrum vendor, certainly, the symbol of the spider and the fly would be too tame a trade-mark, and his own service with chain and ball not too severe a retribution.

With equal hypocrisy, but with vastly less mischief, are

some of the modern life-elixirs. An Elixir of Life Bitters, put up in New York, is reported from Berlin to contain aloes, cinnamon, sweet flag, angelica-root, saffron, burned sugar, glycerin, and strong alcohol. A Swedish Essence of Life consists of aloes, rhubarb, saffron, myrrh, and roots of zedoary, gentian, and galangal, in alcoholic tincture with sugar. A German Aromatic Salt of Life, to correct acidity of the stomach, insure a good appetite, and supply all the saline elements proper to the human body, consists of baking soda, table salt, Glauber's salt, and sugar, flavored with a fragrant spirit of cinnamon, cardamom, bitter orange peel, and root of violets. This mixture is sold—for constant use with the food—at a quarter of a dollar a pound. Quite different was a Swiss Elixir of Life and Cure for Lung Diseases, found to be pure spring water, directed to be given in small doses. Also a Soothing Powder, presented with careful directions for sparing use, to quiet the nerves, was found by Hager to be pure rice starch. The Wondrous Salt for a number of particularly designated diseases, was a fair grade of saltpeter, and a notorious Renovating Resolvent, that has fastened its alliterating trade-name before our faces, the analyst finds to be a sugared extract of ginger and cardamom. A Nerve Balsam consists of alcohol with essential oils of lemon and bergamot; a Nerve Spirit, of alcohol with oils of lavender and rosemary. A "Golden Medical Discovery," and a "Favorite Prescription," companion catchwords of enforced familiarity in two hemispheres, have flourished just as well since both their analyses were published, five or six years ago,—the former consisting of laudanum, lettuce-extract, honey, and very raw whiskey; the latter, of savine, agaric, opium, cinchona, cinnamon, anise oil, gum arabic, and alcohol.

[To be Continued.]

Deodorized Iodoform.—Dr. Hager cautions against the use of certain agents which have been proposed to neutralize the odor of iodoform. Tannic acid, which has been recommended, combines with the iodine of the iodoform, and thereby destroys the odor of the latter; at the same time the new compound is probably without any specific iodine effect.

Balsam of Peru also absorbs iodine, and makes it almost inert; hence it must be used very sparingly, not more than one part for every ten parts of iodoform.

Ethereal oils, such as oil of anise, peppermint, fennel, bergamot, etc., seems the least objectionable means of masking the odor. A small quantity is enough, not more than one part of oil to twenty parts of iodoform. It should suffice to *modify* the odor of the latter, and not to destroy it completely.—*Pharm. Centralh.*, 12.

Testing for Sulphuric Acid in Wine and Vinegar.—(A. Casali.) After pointing out the defects in the processes employed for detecting free sulphuric acid in wine or vinegar, the author describes a new method, which is simple and very delicate. The liquid is ground up in a mortar with finely powdered porcelain (about 4 parts), so that the mixture is not moist to the touch. The porcelain powder must be treated previously with hydrochloric acid to remove every trace of free alkali. The mixture is then ground up with ether, thrown on a filter, and washed with ether (using about 4 parts in all) a little water is added to the colorless filtrate, and the ether distilled off. In this way the sulphuric acid is left in the aqueous solution and may readily be detected by the usual tests. The ether employed should be freed from every trace of acid by agitation with magnesia and water. By this process 0.001 gm. of sulphuric acid in 10 cc. of wine or vinegar can easily be detected.—*Gaz. Chem. Ital.*, 10, 475.

Cinchona.—From Ceylon we learn of a proposal to establish a quinine and quinetum manufactory in Colombo, which would greatly stimulate the cinchona industry. The feeling in the colony as to the competition of the Indian and local Governments in this cultivation is very adverse to its continuance.—*British Mail.*

Table of Solubilities.—(W. Parks Morrison.) This is a carefully prepared table of the solubilities of the purest obtainable commercial substances in diluted alcohol at 60° F.

Process: Diluted alcohol of sp. gr. 0.941 was prepared. A quantity of the finely pulverized substance, weighing from one to six grams, was placed in a small flask, and diluted alcohol was added from time to time from a burette graduated in $\frac{1}{10}$ cc. The flask was well shaken after each addition until the substance was dissolved. Each of the substances was operated upon from four to eight times.

TABLE OF SOLUBILITIES.

Of one Gram of the Substance in Cubic Centimeters of Diluted Alcohol.

Acidum benzoicum	20.
" citricum	1.
" oxalicum	8.
" salicylicum	42.
" tartaricum	1.25
Aluminii et ammonii sulph	760.
Ammonii bromidum	3.
" carbonas	10.
" chloridum	6.
Antimonii et potassii tartras	490.
Argenti nitras	2.50
Cinchoniæ sulphas	20.
Cupri sulphas	518.
Ferri sulphas	236.
Hydrargyri chloridum corros	20.
Lithii citras	25.
Magnesii sulphas	47.33
Morphiæ acetas	50.
" murias	26.
" sulphas	40.
Plumbi acetas	8.
Potassii acetas	.50
" bicarbonas	22.
" bromidum	4.50
" carbonas	1.
" chloras	88.60
" citras	1.
" ferrocyanidum	570.
" iodidum	1.60
" nitras	24.
" et sodii tartras	29.
" sulphas	700.
" sulphis	460.
Quiniæ sulphas	150.
Saccharum lactis	58.
Sodii acetas	3.
" bicarbonas	83.33
" boras	402.
" hypophosphis	5.80
" hyposulphis	3.
" phosphas	298.
" sulphas	81.20
Strychniæ sulphas	60.
Zinci sulphas	48.

NON-OFFICINAL.

Codeia	4.40
Lithii carbonas	1790.
Quinidiæ sulphas	28.
Sodii bromidum	2.50
" salicylas	19 60
" sulphocarbolas	18.

From a *Thesis* presented to the *California Coll. Pharm.* (*Proceedings of Cal. Pharm. Soc.*)

Phosphate of Silver has been used with some success in the treatment of epilepsy by Dr. A. McL. Hamilton, of New York. The particular salt employed is the lemon-yellow orthophosphate produced by mutual decomposition between solutions of nitrate of silver and officinal phosphate of sodium.

Absorbent Cotton.—Mr. Frank L. Slocum has made some experiments, at the suggestion of Prof. John M. Maisch, to ascertain the best process for preparing the so-called *Absorbent Cotton*. He found the following to be the most satisfactory:

Take of the best quality of carded cotton batting, any desired quantity, and boil it with a 5-per-cent solution of caustic potassa or soda for one-half hour, or until the cotton is entirely saturated with the solution, and the alkali has saponified all oily matter. Then wash thoroughly, to remove all soap, and nearly all alkali; press out the excess of water, and immerse in a 5 per cent solution of chlorinated lime for 15 or 20 minutes; again wash, first with a little water, then dip in water acidulated with hydrochloric acid, and thoroughly wash with water; press out the excess of water, and again boil for 15 or 20 minutes in a 5 per cent solution of caustic potassa or soda; now wash well, dipping in the acidulated water and washing thoroughly with pure water. Afterwards press out and dry quickly.

Boiling with caustic alkalies saponifies all oil and greasy matter, and the soap formed is removed by washing; if it were not washed out before bleaching, an insoluble lime soap would be formed and precipated on the fibres. Dipping in very dilute hydrochloric acid after bleaching renders the removal of calcium compounds more easy. At this stage the cotton has all the appearance of absorbent cotton, but it absorbs water rather slowly; when again boiled with a caustic alkali, more organic matter of a non-greasy nature is removed, and the cotton is rendered perfectly absorbent. On dipping the cotton in dilute hydrochloric acid at the last washing a chloride is produced with the caustic base used, which is more readily washed out than the alkali itself.

The amount of loss by this process is practically 10 per cent. A sample of 360 grs. lost, on boiling with alkali and bleaching, 15 grs., or 4.17 per cent, and 270 grs. of this bleached sample lost, on again boiling with an alkali, 14 grs., or 5.18 per cent, a total loss of 9.35 per cent.

A microscopical examination was made to ascertain the change that takes place in the cotton by this process. Cotton fibres are tubes, with two sides collapsed together, forming ribbon-like fibres; at each edge the fibre does not come wholly together, thus leaving two tubes, one on each edge of the fibre. If one end of the crude cotton fibre be brought in contact with water, capillary attraction is generally soon stopped in the tubes by oil, and no capillary attraction whatever takes place in the fibrous structure itself. After the cotton has been rendered absorbent, the fibres will absorb water throughout their whole structure and the collapsed fibres will distend. Hence absorbent cotton is cotton entirely freed from all matter that will obstruct capillary attraction.—*Amer. Journ. Pharm.*, 1881, 53.

Treatment of Hay-Fever.—Dr. Hermann Hager, who has observed a case of catarrh with subsequent asthmatic trouble and loss of appetite, which closely resembled the hay-fever of England and the United States, thought of trying his *catarrh-pills* (I.), prepared after the following manner:

℞ Quinidiæ sulphatis.....10.0 gm.
Tragacanthæ.....4.0 "
Althæa rad.....1.0 "
Gentian. rad.....8.0 "
Glycerin.....7.0 "
Acid. hydrochloric.....7.0 "
M. Make 200 pills. Take 3 every two hours.

(Comp. also New. Rem., 1880, 243; 1881, 254.)

The condition of the patient improved in the course of the first day, and on the second day the patient was well. Six months afterwards the attack again occurred, but yielded readily to the same treatment.

Hager thinks that hay-fever is caused more probably by the dust or spores of fungi, than by the pollen of phænogamous plants.—*Pharm. Centralhalle*, No. 18.

Chaulmoogra Oil and Gurjun Oil in Leprosy.—J. D. Hillis, the Superintendent of the General Leper Asylum, British Guiana, West Indies, has used, with much success, chaulmoogra oil in doses commencing with 10 minims in emulsion with milk, and in the same cases as a liniment, with one part of the oil to fifteen parts of olive oil. He has had better results, however, with Gurjun oil, and reports a case in which all evidences of the disease had disappeared with its use. The cases in which it had failed were either too far advanced, had hereditary taint, or had been preceded by small-pox, syphilis, or yaws (frambœsia).

James Slartin reports that a case of true leprosy of the anæsthetic variety received great benefit from the use of five minims of chaulmoogra oil, thrice daily, increased to twenty-five minims at each dose.—*Br. Med. Jour.*

Displacement of the Sodium Base in Sodium Chloride by Copper Hydrate.—(D. Tommasi.) Copper hydrate in a moist state possesses the singular property of liberating a certain quantity of alkali, if it is brought in contact with certain saline solutions, such as sodium and potassium chloride, potassium bromide, sodium sulphate, etc. The displacement of the alkali takes place even at temperatures as low as 4° and 5° C. If copper hydrate, well washed, and moist, is added to a solution of sodium chloride of 10 per cent, the liquid in a few minutes acquires an alkaline reaction, which increases on standing. Meantime the hydrate is converted into a pale-green powder, containing chlorine. Moist copper carbonate acts in a similar manner.—*Comptes Rend.* and *Chem. News*, March 23d.

Diachylon Ointment.—Mr. M. Eisner, of Philadelphia, has prepared a modified diachylon ointment which is approved by Dr. I. H. Duhring, and is stated by the latter (*Med. Times*, May 7th) to be made as follows: One part of freshly-precipitated (from acetate of lead) pure white hydro-oxide of lead is rubbed with two parts of water, and mixed well with six parts of the best Lucca olive oil. It should be stirred for about two hours over a hot-water bath near the boiling point, and cooled with constant stirring until the proper consistence is obtained. While cooling, a drachm of oil of lavender to each half pound of ointment is to be added. This, Dr. Duhring says, is a smooth, whitish, elegant preparation, and is altogether more desirable than that made according to the original formula.

Bulgarian Opium.—A. Theegarten, chemist of the Superior Medical Council of Bulgaria, reports to the *Pharm. Zeit. f. Russland* (No. 13), that opium is at present produced in the district of Lowtscha (Bulgaria), and expects to be soon in a position to give details as to production and characteristics. He had received only a few specimens so far, which were covered with leaves of unknown origin. The color was brown externally, internally light-brown; the odor was strong and equal to that of good commercial opium, and the taste bitter and sharp. It was found to contain only 4.22% of water, probably owing to evaporation, as it was in fragments; 69.65% were soluble in water, and it was found to contain 8% of pure morphia.

A New Preservative Salt.—The *Chemische Fabrik Eisenbüttel* in Braunschweig has patented (Germ. P. 13,545) a compound salt prepared by melting together 4 mol. of crystallized boracic acid and 1 mol. of phosphate of sodium at 120° C., whereby acid phosphate of sodium is produced in which is then dissolved an equivalent [?] quantity of nitrate of potassium and chloride of sodium. The compound is completely melted together at 130° C., and when cold has much similarity to the Tartarus boraxatus of the German Pharmacopœia. It is amorphous, rather hygroscopic, has an acid reaction, is soluble in 3½ parts of water, and is a good preservative for articles of food.—*Chem. Zeit.*, No. 17.

CORRESPONDENCE.

The "Adulteration" Act.

TO THE EDITOR OF NEW REMEDIES:

The Bill to Prevent the Adulteration of Food and Drugs, prepared under the direction of the National Board of Trade, having become a law in this State and in New Jersey, I desire in behalf of our committee to express our obligations to you for the very valuable aid you have rendered us in securing the enactment of these laws. This gratifying result is the outcome of the competition for the best essay and draft of a law for the prevention of the adulteration of food, for which Mr. Thurber placed one thousand dollars at the disposal of the National Board of Trade, to be distributed in prizes. The bill, which has now passed the Legislatures of two States, and as regards national jurisdiction is now pending in Congress, was prepared by the commission of experts who were selected by the President of the National Board of Trade to award these prizes.

It is hard to over-estimate the value of the work which was undertaken by these gentlemen at the request of the National Board of Trade, purely as an honorary service, without compensation, and which occupied several months of valuable time. It would be difficult to find four men better qualified for the work than those selected, viz.: John S. Billings, U. S. Army, Vice-President National Board of Health, Washington, D. C.; Prof. Chas. F. Chandler, President Board of Health, New York; ex-Chancellor B. Williamson, Elizabeth, N. J., and A. H. Hardy, Esq., of Boston. In these we have not only men of high character, but possessed of that ability and technical knowledge necessary for a service which required the experience of the physician, chemist, and health officer, as well as the jurist to determine its constitutional bearings, and the merchant to judge of its effect upon trade.

After the commission had finished its labor, the task remained to bring it before Congress and the various State Legislatures, and secure the enactment of the laws recommended. A special committee was appointed for this purpose by the National Board of Trade, and this committee is greatly indebted, not only to the press generally, but also to the following-named firms and individuals: Messrs. W. H. Schieffelin & Co., Messrs. McKesson & Robbins, Messrs. Lazell, Marsh & Gardiner, Mr. S. R. Van Duzer, Messrs. B. W. Robinson & Son, Messrs. Patterson & Purdy, Messrs. Lehn & Fink, Messrs. Hall & Ruckel, Messrs. Tarrant & Co., and Messrs. Frazer & Lee, of the wholesale drug trade in this city. Messrs. H. K. & F. B. Thurber & Co. and Messrs. Austin, Nichols & Co., of the grocery trade; to Messrs. Havemeyers & Elder, the DeCastro & Donner Sugar Refining Co., the Brooklyn Sugar Refining Co., Messrs. F. O. Matthiessen & Wiechers, the Havemeyer Sugar Refining Co., Messrs. C. W. Durant & Son, Messrs. Moller, Sierck & Co., Messrs. Dick & Meyer, and the North River Sugar Refining Co., in the sugar trade.

In the case of Messrs. Schieffelin & Co. and Messrs. Havemeyers & Elder, their interest was manifested by sending representatives of their respective firms to appear before the Legislative Committee in advocacy of the bill.

It is my belief that our State Board of Health will so enforce this law that the public health will be protected and legitimate trade not embarrassed, while the products affected by it manufactured in the State will command a premium over those of States where similar laws do not exist or are not enforced.

It is to be hoped that all the States will soon take similar action, and that Congress will at its next session pass the bill prepared for Congressional enactment.

Respectfully, HENRY C. MEYER.

NEW YORK, June 6th, 1881.

Sassafras Oil as a Remedy for Rhus-Poisoning.

EDITOR OF NEW REMEDIES:

DEAR SIR:—In the September number of NEW REMEDIES, 1880, page 278, and in your March number of this year, page 85, you give several remedies for rhus-poisoning, none of which seems to have been effectual in "checking the disease." Allow me to suggest to you and your numerous readers the free use of oil of sassafras in these cases. I have used it for years, and have never been disappointed in a *single instance*. The following is my prescription:

℞ Sweet oil..... ℥ i.
(Fresh cream is better.)
Oil sassafras..... gtt. xv.

M. S. Anoint the face, hands, and all affected parts well three or four times a day.

If the bowels are constipated, or there are febrile symptoms, give sulph. of magnesia as a laxative. Try it, and you will be satisfied with the results in the most aggravated case. Respectfully, H. NEESON, M.D.

BELLEVUE (Bosier Parish), LA.,
May 29th, 1881.

Polygala Boykinii Nuttall.

EDITOR OF NEW REMEDIES:

DEAR SIR:—I send you to-day a plant that I think belongs to the Senega family; it grows very abundantly about here in central Alabama, in the old fields of the valley lands; it has the virtues of *Polygala Senega*, if not superior, as an expectorant, it resembles the latter in everything except a few slight differences in botanical description. Please tell me in next number of NEW REMEDIES its name, and if it has been used in regular medical practice. J. H. GUNN, M.D.

CALERA, ALA., June 3d, 1881.

[The specimen has been pronounced by Dr. Laurence Johnson to be *Polygala Boykinii* Nuttall. There appears to be great similarity in the properties of a number of the POLYGALACEÆ, at least seventeen varieties being mentioned by Wood.

The *P. Senega* is, of course, best known, but King, in his Amer. Dispensatory, mentions *P. Nuttallii*, which is said to be used as a domestic medicine for ague on Long Island, and as a remedy for boils, cutaneous eruptions, and especially for erysipelas. The *P. rubella* has been used as a bitter tonic, or, in larger doses, as a laxative and diuretic. We have thus far found no reference to the medical virtues of *P. Boykinii* Nutt.—ED. N. R.]

Compound Glycerin Mixture.

TO THE EDITOR OF NEW REMEDIES:

At the last meeting of the Miami Valley Medical Association, I submitted the following as a substitute for Brown mixture—the Mistura Glycyrrhizæ Comp. of the U. S. P. under the caption of "*Mistura Glycerinæ Comp.*" The formula was ordered published with the Proceedings, viz., for a 32 oz. mixture:

℞ Ant. et pot. tart..... gr. iv.
Aquæ camphoræ..... fl. ℥ ij.
Aquæ fœniculi..... fl. ℥ viij.
Liquor. morph. sulph..... fl. ℥ i.
Glycerinæ,
Syr. simpl.,
Mucil. acaciæ..... āā ℥ vi.
Alcohol..... fl. ℥ ij.
Spts. ætheris nitrosi..... fl. ℥ i.

M. F. H. DARBY, M.D.

MORROW, OHIO, June 10th, 1881.

Tripolith.

EDITOR NEW REMEDIES:

DEAR SIR:—On page 186, June number, 1881, answer 888, Tripolith, you say, "it is not known how it (Tripolith) is prepared." According to Dr. Wichel (*Chemiker Zeitung*) it is composed of epsom salt, powdered coke and plaster of Paris. Moist it is 8%, and dry 12% lighter than plaster of Paris. DR. HEUEL.

38 IRVING PLACE, NEW YORK, May 27th, 1881.

BIBLIOGRAPHY.

THE CHEMISTRY OF MEDICINES, PRACTICAL. A Text- and Reference-Book for the Use of Students, Physicians and Pharmacists, embodying the Principles of Chemical Philosophy and their Application to those Chemicals that are used in Medicine and in Pharmacy, including all those that are officinal in the Pharmacopœia of the United States. With 50 original cuts. By J. U. LLOYD, Professor of Chemistry and Pharmacy in the Eclectic Medical Institute, Cincinnati, O., etc. 8vo. Cincinnati, 1881.

WE take pleasure in drawing the attention of pharmacists and physicians, and particularly of those who are still engaged in the study of their profession, to Prof. Lloyd's text-book, which aims to smoothen the path to those who would find difficulty of treading their way through the mazes of elaborate text-books. Being written with a special view to medicinal chemicals, most of the matter not germain to this subject has been omitted, and what has been given is arranged in a progressive, systematic manner. Each point which experience has shown to present difficulties to the beginner is elucidated in a clear and precise manner. Beginning with an explanation of the necessary apparatus used in preparing and testing chemicals, the author next explains the fundamental points of chemical philosophy, on the basis of the new notation, being particularly explicit when treating of the subject of quantivalence and salts. He also takes occasion to explain, by the way, the usual technical terms occurring in chemical language. Passing over to Inorganic Chemistry, he commences with hydrogen, and in connection with it treats of all the officinal acids both inorganic and organic. He then takes up, one after another, the other elements, and, for the sake of completeness, also briefly mentions and describes those which have, so far, not been employed in medicine or pharmacy. The chapter devoted to organic chemistry treats of the alcohols, ethers, aldehydes, carbohydrates, alkaloids, glucosides, and other proximate principles used in medicine. We are glad to see that Prof. Lloyd has adopted the rule —now becoming more and more established in English chemical language—of terminating the English names of alkaloids in *-ine* (as *quinine*, *morphine*, etc.), and the names of neutral or indifferent substances in *-in* (as *salicin*, *santonin*, etc.) A brief account of urinary tests concludes the book.

Prof. Lloyd himself states in the preface that "the study of medicinal chemicals is simply an application of general well-known chemical laws to such agents and compounds as are employed in medicine. A partial instruction in these laws may be sufficient for the manner of teaching in many schools; but during all such special teaching, and even during the study of any one remedial agent or compound, reference should invariably be made to the general laws."

We can recommend the book as a very practical and easily intelligible guide for the introduction to the study of chemistry, and particularly so to students of medicine and of pharmacy.

AN UNOFFICINAL PHARMACOPŒIA. Comprising over Seven Hundred Popular Non-Officinal Preparation, and Containing an Account of the Metric System of Weights and Measures, Americanized and Simplified; A Comprehensive Dose Table, and Three Hundred Practical Illustrations of Metric Prescription Writing, selected from Recipes in Actual Use in Hospital and Out-Door Practice. By OSCAR OLDBERG, Phar.D., etc. Philadelphia: Presley Blakiston, 1881, pp. 503, 8vo.

WHILE this work, in the main, entitles the author to much credit, there are some points upon which it is open to criticism. First, we think that it was ill-advised to call it an "Unofficinal Pharmacopœia," since, in the nature of things, any work of the kind entitled to be called a pharmacopœia should be issued only by some body or corporation, recognized to be an authority, and not by a single person, however eminent he may be. In other words, a pharmacopœia *must* be officinal.

Again. It is not advisable to apply the term "pharmacopœia" to too many works, as it is apt to lead to confusion in speaking of *the* pharmacopœia.

Third.—In speaking of the forthcoming Sixth Edition of the Pharmacopœia of the United States (p. 16) the reader would quite naturally infer that the Committee of Revision and Publication had been directed by the Convention to adopt the metric system in the new work. A careful reading of the instructions (see NEW REMEDIES for June, 1880, p. 187, No. 15) will show that *both* metrical and apothecaries' weights are to be used "whenever it is necessary to employ definite expressions of weight," and then only. *Parts* by weight (admitting the use of *any* system) being directed in all other places, except in the matter of fluid extracts, where the Committee is allowed to use its discretion.

So much of Professor Oldberg's work as relates to the Metric System (pp. 21–59 and 356 to 488) has already been noticed on p. 153 of this volume. The remainder contains a large number of formulas which have been recast in the terms and quantities of the "Americanized" metric system, and will be found interesting, valuable, and, so far as we have observed, reliable.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION at the Twenty-eighth Annual Meeting, held in Saratoga Springs, N. Y., September, 1880, also the Constitution, By-laws, and Roll of Members. Philadelphia, 1881, pp. 661, 8vo.

THIS volume possesses the usual excellent features of the series, as well as the additional attraction of a phototype by Gutekunst, of Philadelphia, of the late William B. Chapman, of Cincinnati, the president of the association in 1854–55.

A GUIDE TO THE CLINICAL EXAMINATION OF PATIENTS AND THE DIAGNOSIS OF DISEASE. By RICHARD HAGEN, M.D., of Leipzig. Translated from the Second Revised and Enlarged Edition by G. E. GREENE, M.D. Boericke & Tafel, New York and Philadelphia, 1881, 223, 8vo.

THIS is a condensed manual, intended as a guide merely for the clinical student, and as such appears to be well adapted for the purpose.

A COMPENDIUM OF MODERN PHARMACY AND DRUGGISTS' FORMULARY. By WALTER B. KILNER, Springfield, Ill., 1881, 8vo, pp. 686. Second edition.

WE noticed in our last volume the first edition of this very comprehensive work. This second edition contains a number of new formulas, chiefly among the elixirs and miscellaneous receipts. There are few retail druggists who will not find it a valuable addition to their libraries.

NEW COMMERCIAL PLANTS AND DRUGS. No. 4. Part I.—Plants, Description, and How to Grow Them to the Best Advantage. Part II.—Drugs, Description, and Reports of their Success, etc. By THOMAS CHRISTY, F.L.S. London: Thomas Christy & Co., 1881, pp. 61, 8vo, 1*s.*

THIS is one of the series of valuable pamphlets issued at varying intervals by a house which deals largely in novelties.

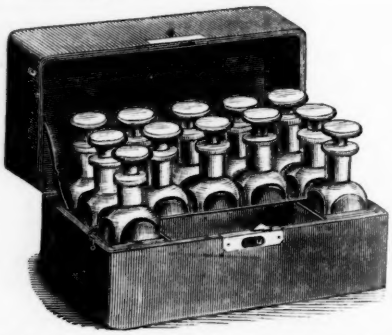
THE DISEASES OF CHILDREN; a Practical and Systematic Work for Practitioners and Students. By WILLIAM HENRY DAY, M.D. (of London). Second Edition. Re-written and much enlarged. Philadelphia: Presley Blakiston, 1881, pp. 752. Cloth, $5.00, sheep, $6.00.

THE reader of this treatise will find it to be one of the most satisfactory guides in the diagnosis and treatment of diseases peculiar to children to be had in the language. We have been impressed, in looking over its pages, with the amount of available knowledge which it contains, as well as the clearness and force with which it is expressed.

NOVELTIES.

The Family Medicine Chest is, at this time of the year, a rather important article in the outfit of all who are preparing for a summer in the country, or an extended trip abroad. And at all times a little collection of household remedies in a shape convenient for access and preservation is one of the essentials of a well regulated family. If every family had such provision for slight attacks of illness, a knowledge of the properties of each article and its uses would soon be acquired, and there would be much less demand for advertised panaceas.

The FAMILY MEDICINE CHEST CO., of 156 Fourth ave., make a case which is altogether the best, cheapest, and most satisfactory article of the kind that we have ever seen. Each case is 8½ in. long, 5½ in. wide, and 5 in. high; contains 12 mushroom-top glass-stoppered 2-oz. bottles and a space for cerates, plasters, medicine-glass, etc. The workmanship is excellent, and the whole affair makes an attractive article of stock. Each bottle has a number on the shoulder and a corresponding number on the stopper, so that they cannot become disarranged. In the top of the box is a card correspondingly numbered with spaces for the names of the remedies, so that it will not become necessary to take out the bottles to find any particular one.



These cases can also be used to hold the various reagents for urinary and other forms of clinical analysis which every physician should have in his office; the space ordinarily used for plasters, etc., serving to hold test-papers, urinometer, and test-tubes.

We have no doubt that an apothecary, doing a family business, can sell almost any number of them.

The Lactose Preparations of R. B. FERGUSON, of Second st. and Pennsylvania ave., Washington, D. C., have lately come to our notice. Our readers are probably aware of the fact that there is a growing demand for a class of powdered preparations in which sugar of milk is a basis and which are so made as to represent definite quantities of various drugs. Such an article was noticed by us on page 346 of NEW REMEDIES for Nov., 1879, when we referred to the *Saccharated Extracts* of the WHEELER CHEMICAL WORKS of Chicago. These were so made that each grain represented the active elements of a grain of the crude drug. Mr. Chas. Rice and others have proposed the preparation of a class of dilute sugar-of-milk powders, which Mr. Oscar Oldberg has proposed to call *lactoses or lactosa* (sing. lactose or lactosum) and which have a strength of $\frac{1}{10}$ the drug from which they are prepared. Prof. Remington, of Philadelphia, has suggested another variety of this class, which he calls *Abstracta* or *Abstracts*, which have *twice* the strength of the drug, and which are made by adding a fluid extract to sugar of milk, evaporating the menstruum, and powdering the product.

The *lactoses* appear to be rather popular about Washington, and Mr. Ferguson makes a line of handsome preparations of this class about which particulars will be furnished on application.

Soluble Compressed Hypodermic Tablets.—We have received from Messrs. JOHN WYETH & BROTHER, of Philadelphia, some beautiful samples of the minute tablets for preparing hypodermic remedies, proposed by Dr. H. Augustus Wilson. The list of tablets embraces nearly twenty varieties in which morphia, or atropia, or both, are combined, in various proportions, with sulphate of soda, the latter serving merely as a neutral vehicle. The manufacturers have had the benefit of the assistance, not only of Dr. Wilson, but likewise of Prof. Bartholow in adjusting the combinations to the usual needs of practice.

These tablets are entirely and readily soluble in the amount of water customarily used for hypodermic injection, and possess the additional advantages of absolute accuracy of dose and perfect preservation of the drug from such changes as it is apt to undergo when kept for any considerable time in solution.

Royal Cement is the name given by the HEKTOGRAPH MANUFACTURING CO., of New York, to a cement which is made by them and recommended for all purposes for which a cement, glue, or mucilage is required. It is guaranteed to resist the action of hot water. It retails, with brush, at 25 cents per bottle.

REQUA & WETMORE, of 130 Fulton st., N. Y., send us their first illustrated price list. We have before noticed some of their 10-cent "specialties," and observe that they have very largely added to the number of goods of this class which they offer to the trade.

"Meade and Baker's Carbolic Mouth Wash" is prepared by T. ROBERTS BAKER, of Richmond, Va., and is recommended by the manufacturer for carious teeth, sore gums, sea-sickness, and sore throat. It is put up in 4 oz. bottles with sprinkler-stoppers to retail for 50 cents.

"Bugoline" is the trade name applied by the PESTICIDE CHEMICAL CO., of Boston, Mass. (Mr. W. C. Brigham), to a variety of preparations intended for the extermination of insect pests. A liquid form is adopted for the destruction of bugs, roaches, and ants; a powder for fleas, lice, roaches, water-bugs, ants, garden worms, and similar vermin, and an ointment for preventing the attacks of flies, fleas, ticks, lice, etc., on domestic animals. Besides these, a special form of exterminator for rats and mice is provided.

The powdered forms are put up in tin boxes having an ingenious contrivance for discharging their contents in a dust.

"Aromatic Camphor," manufactured by W. C. BRIGHAM, is a coarse vegetable powder of the general appearance of saw-dust of red cedar, mixed with aromatic herbs and carbolic acid. It is recommended as a protective for fabrics against moths in place of camphor at something near half the cost.

"Carpetine" is a somewhat similar powder, to be used as a protective against the "Buffalo-moth" or "Carpet-beetle," which of late years has caused considerable injury to rugs and carpets.

Post Office Regulations Respecting Powdered Substances.—A general order was issued June 2d, by the Postmaster-General declaring samples of flour or other powdered substances unmailable, except when put up in transparent bags made of parchment paper or similar material, and sealed so that no particles can sift through. These bags must also be inclosed in boxes or tubes made of hard wood or metal with sliding or clasp or screw lids.

PHARMACEUTICAL ASSOCIATIONS.

NEW YORK STATE PHARMACEUTICAL ASSOCIATION.

THIRD ANNUAL MEETING.

THIS meeting, of which we made brief mention in our last issue, took place at Buffalo on the 19th, 20th, and 21st of May. There was a large attendance from all parts of the State, and the meeting was in many respects an interesting one. Much credit is due to the local society—the Erie County Pharmaceutical Association, for the completeness of the arrangements which enabled the Association to attend to its business, scientific, and social interests. If any friendly criticisms should be demanded, it would probably be that the Association devoted too large a proportion of its time to business routine and pleasure. The very interesting papers read did not receive that full discussion which they might have had, had they been presented earlier in the session. The full attendance and the very large accession of new members show the deep interest taken throughout the State in this comparatively young association, which now numbers a membership nearly double that of any other State association.

Order was called at half-past eleven o'clock, with Prof. P. W. Bedford, the President, in the chair. Of the two hundred persons in attendance, about fifty were ladies. Roll call was dispensed with.

ADDRESSES.

The President introduced MR. M. E. Beebe, President of the Common Council of Buffalo, who welcomed the visitors in an address which was both eloquent and hearty in its greeting. On behalf of the medical fraternity, Prof. James P. White, of the Medical Department of the University of Buffalo, delivered an address which was replete with wisdom and timely observations.

He welcomed the Association in behalf of the medical profession of Buffalo; alluded to the close professional relations that should exist between pharmacists and physicians; mentioned some of the important additions to medical knowledge and the materia medica by apothecaries; the importance of a knowledge of pharmacy on the part of physicians and of therapeutics among pharmacists, and the necessity for each to limit himself to his legitimate sphere in practice.

The doctor then spoke of the importance of legislative co-operation in elevating the standard of pharmacy by the enactment of proper laws; he paid tribute to the organizers of the Association, and wished the members a very successful session, a hospitable reception on the part of all the citizens of Buffalo, and in the name of the medical profession a hearty and a cordial welcome. Prof. White was followed by MR. JULIUS RIEFFENSTAHL, President of the Erie County Pharmaceutical Society, who presented a hearty welcome in the name of the druggists of Buffalo. To Mr. Rieffenstahl and his associates on the committee, who made this welcome substantial by untiring labors and attention, much credit is due for the many pleasures offered and enjoyed during the stay of the members and their families.

Short speeches, in response to these addresses, were made by Messrs. J. H. Eaton, of Syracuse; F. K. Sweet, of Lockport; and Geo. H. Arnold, of Cortland.

The minutes of the last annual session were presented in printed form, and their adoption moved by Mr. Arnold. This was objected to by Dr. G. W. Baker and others, and a lengthy discussion ensued. President Bedford took the floor in explanation of his own action in the matter. Action deferred until afternoon session.

Prof. Bedford then delivered his address which contained propositions for the amendment of the constitution in various particulars; the amendment to the by-laws empowering delegates to other associations to fill vacancies in the delegations; an invitation to members from other State associations to the privileges of the floor. He alluded to the revision of Pharmacopœia of the United States, and to the labors performed in that work by members of this Association. The address and its recommendations were referred to a committee.

MISCELLANEOUS BUSINESS.

The courtesies of the floor were voted to the delegation from the Pennsylvania Association—Messrs. Charles A. Heinitsh and U. E. Shaw, who were both present. The applications of one hundred and twenty candidates for membership were presented by the Executive Committee. Invitations were received from the Erie County Pharmaceutical Association to the members and lady friends to a reception at St. James' Hall at 8 o'clock in the evening; also to an excursion to Niagara Falls on Thursday afternoon.

Second Session.

The Association re-assembled at 3 o'clock, when the following-named persons were elected members:

NEW MEMBERS.

Leander E. Howard, Hancock; Frederick Ely, Owego; Alfred G. Ely, Owego; Delos D. Sheldon, Lockport; M. F. Michaelson, Brooklyn; Peter D. Leys, Brooklyn; G. J. Seabury, Buffalo; L. H. Meyer, Brooklyn; H. J. Meninger, Brooklyn; B. J. Stow, New York; H. M. Boardman, Brooklyn; John McDonald, Brooklyn; Chas. H. Scoville, Tonawanda; J. C. Franklin, Lansingburgh; E. C. Livingston, Jamestown; Edward F. Dickenson, Jamestown; Wm. McQuirk, Binghamton; W. Chester Mondy, Brooklyn; Elisha Post, Brooklyn; Louis F. Baylis, Jamaica; Will. R. Post, Catskill; A. D. McIntyre, Oswego; Chester Johnson, Oswego; Hooper C. Sharp, Oswego; William De Lano, Ithaca; H. Bradway Phillips, Fulton; J. J. Mitchell, Ithaca; C. A. Jones, McGrawville; W. A. Kellogg, Homer; W. R. James, Medina; A. L. Webber, Middleport; Wright Gardner, Palmyra; W. L. Tucker, Syracuse; Charles H. Sagar, Auburn; G. W. Barrell, Albion; G. W. Weaver, Lockport; Eugene C. Kirby, Penn Yan; George C. Schell, Geneva; James McDougall, Binghamton; D. Douglass Brandt, Walton; H. S. Sloan, Binghamton; Charles Stoddart, Buffalo; G. W. James, Buffalo; J. C. Sandscheft, Buffalo; Charles Smither, Buffalo; Jerome W. Jeffrey, Buffalo; Thomas R. Bullymore, Buffalo; George Biles, Buffalo; R. B. Vaughn, Buffalo; A. J. Shapaker, Buffalo; S. Keller, Buffalo; J. E. Brown, Buffalo; E. N. Ross, Buffalo; C. M. Harvey, Buffalo; Phillip Kuhles, Buffalo; Horace P. Hayes, Buffalo; J. S. Trowbridge, Buffalo; H. P. Munroe, Buffalo; W. H. Tibbs, Buffalo; John Coulson, Buffalo; W. B. Hoff, Buffalo; W. B. Drake, Buffalo; Morris D. Rouse, Buffalo; Thomas Stoddart, Buffalo; Albert R. Miller, Albany; John C. McClure, Coxsackie; J. D. Orcutt, Painted Post; C. F. Brown, Cortland; Milford M. Mayberry, Cortland; Silas R. Wicks, Trumansburg; Otis Lincoln, Owego; Francis C. Corner, Poughkeepsie; Albert C. Anthony, Buffalo; J. L. Perkins, Buffalo; C. J. F. Jones, Buffalo; J. H. Smith, Au Sable Forks; G. H. Wardell, Adams; James A. Vail, Deposit; Joseph Schnell, Jr., Binghamton; George H. Fuller, Pulaski; Wm. H. Taylor, Syracuse; R. L. Estes, Fairpoint; C. L. Peacock, Fairpoint; A. H. Youmans, Whitney Point; M. F. Hyde, East Albany; Miss M. E. Johnson, Poughkeepsie; G. L. Dwyer, Schenectady; E. F. Jenkins, Cortland; B. O. Lamphear, Jamaica; J. W. Bachman, Hornellsville; G. W. Holloway, Syracuse; H. W. Austin, Glens Falls; John Bartholomew, Elmira; Herman W. Atwood, New York; Frank S. Smith, New Brighton; Bernhard Osame, New York; G. A. Dykeman, Catskill; George F. Mott, Catskill; Oscar Oldberry, New York; E. C. B. Worinke, New York; E. L. Hodskin, Fairport; Thomas B. Tuttle, Le Roy; M. E. Benedict, Geneva; Weller Rose, Chenango Forks; H. E. Outwater, Newark Valley; William B. Smith, Candor; Judson B. Todd, Ithaca; Fred. C. Taber, Addison; G. R. Dutton, Honeoye Falls; Louis

D. Collins, New York; Samuel D. Wadham, Elmira; H. W. Huntington, Elmira; Oscar F. Miller, Fair Haven; John H. Childs, Clyde; John Munday, Albany; A. A. Stark, Conesus Centre; Thomas J. France, Brooklyn; George P. Tapling, Brooklyn; James H. Benjamin, Brooklyn; W. Eugene Card, Morrisania; Levi B. Curtis, Ithaca; Wm. Phillip Neele, Syracuse; Wm. V. Robinson, Nunda; Fred. S. Coburn, Syracuse; Brewster S. Brown, Oneida; James V. D. Coon, Olean; Peter Siener, Rochester; Herbert W. Austin, Glens Falls; Fred. H. Loomis, Woodhull.

MINUTES.

A motion made at the morning session, for the approval of the minutes of the proceedings of the second annual meeting of the Association at Syracuse in May, 1880, was then taken up. A discussion ensued as to certain alleged informalities in the minutes, which were stated to be in direct contravention of the constitution. Mr. DeForest, of Brooklyn, finally offered the following resolution which was adopted:

Resolved, That the minutes of the meeting held at Syracuse are in several instances incorrect, and in the absence of a better record from the Executive Committee, the minutes as they are entered be adopted.

LEGISLATION.

Mr. Napier then opened a discussion on the proposed pharmacy law. Calls being made for the report of the committee, Mr. Napier reported progress and asked further time. Mr. Nicot moved that the committee be discharged from the further consideration of the bill. Mr. Baker, of the committee, moved as an amendment, that the committee be relieved from the further consideration of the pharmacy bill. Carried. Finally the President, from the floor, Mr. Eaton in the chair, offered the following resolution, which was adopted:

Resolved, That the New York State Pharmaceutical Association, now in session in Buffalo, do respectfully submit that they heartily indorse the pharmacy bill as it passed the Senate and was introduced in the Assembly, and would earnestly ask that it be adopted. They respectfully state that the adoption of the amendments recently introduced in the Assembly will seriously impair its usefulness and nullify the object of the bill, and should not pass.

On motion, the President appointed Dr. Davidson and Messrs. Arnold and Lyman to circulate a petition to the Assembly and secure the signatures of the members of the Association thereto.

PAPERS.

Prof. Bedford then read a paper in reply to the query: "Benzoic acid of commerce is derived from several sources. Is that which is claimed to be made by sublimation from benzoin always derived from this source, or from synthetical acids?"

In reply to this query, the writer alludes to the several methods by which benzoic acid is obtained, either by sublimation direct from finely bruised benzoin, or by boiling the benzoin with calcium hydrate, precipitating by hydrochloric acid, and then subliming in order to obtain the usually recognized form of this acid. The first process yields the most fragrant acid, the second yields the largest result. Hippuric-benzoic acid has for its origin the urine of animals, in which hippuric acid exists naturally. By concentrating the urine, the addition of hydrochloric acid deposits hippuric acid in impure, dark, crystalline form. The crystals are drained, dissolved by boiling water, heated with chlorine to decolorize, after which it is again crystallized. It is then converted into a sodium salt, the solution decolorized with animal charcoal, precipitated again by acid, washed and dried, and by sublimation is converted into benzoic acid. This acid is not only devoid of the fragrance of benzoin-benzoic acid, but has at times a fragrance that is peculiarly suggestive. This variety in commerce is usually termed "German benzoic acid."

The German pharmacopœia does not recognize this variety, but its commercial origin has given it the commercial title by which it is bought and sold. The importation of this variety has been very large proportionately, and it may be safely said that more than two-thirds of all the benzoic acid used in this country is of the hippuric variety. Of this style of acid, there are two varieties known, and these are obtained respectively from the fluid excretions of horses and cows. A third source of benzoic acid is from toluol, which is analogous to benzol. Toluol derives its name from the fact that it was first obtained from balsam of tolu. If benzoic acid obtained from benzoin be heated with hydrate of lime, it is converted into benzol. This identifies benzoic acid as belonging to the same general chemical group. If we now take benzol and work some of the processes of organic-synthetic chemistry, we may produce benzoic acid. Toluol, when boiled with nitric acid or with a solution of chromic acid, is converted into benzoic acid.

In the manufacture of artificial oil of almonds (nitro-benzole or oil of myrbane), toluol is a by-product, and is converted into benzoic acid readily and cheaply. This form of acid retains a peculiar odor of nitro-benzole, which is more noticeable when the package containing it is first opened. This variety is known as toluol-benzoic acid, is made largely in Germany, and during the past year several hundred pounds of it have been imported through the New York Custom House. As neither the hippuric nor the toluol-benzoic acids have the peculiar odor of benzoin-benzoic acid, it is claimed that occasionally the latter acid is added to the other varieties to give them a more "genuine" odor. This I am not able to substantiate by any knowledge or experience of my own. The query is whether the acid which is claimed to be produced by sublimation from benzoin is really obtained from that source or from the synthetical acids. To this I would reply that the importers' or manufacturers' agents here always sell them under their true name or origin; that when sold by most of the wholesale drug houses they are sold under their name.

And it may be added that while the manufacturers and wholesale dealers always sell them under well-known and distinguishing titles, that, beyond that, it is rarely ever sold under any name which identifies the source from which it is obtained. A simple test which readily distinguishes the urine benzoic acid is the permanganate of potassium. If the acid be neutralized with hydrate or carbonate of sodium, and a few drops of a weak solution of permanganate be added, the color of the permanganate is very readily discharged by the urine-benzoic acid, while it is converted into a green color if the benzoic acid be present; it does not fade out for some minutes if it be the true benzoin-benzoic acid. If stronger solutions are used with a process of caustic potassa and permanganate of potassium, added to a deep violet color and heated, the color of the benzoin-benzoic variety is a green of decided hue, while the hippuric-benzoic variety grows pale and fades out.

COATED PILLS.

Mr. Clay W. Holmes read a paper on "The therapeutic value of plain and coated pills when old and new." The writer prefaced his observations with the assurance that his experiments were made solely with a view to afford the pharmacist an aid in his own store, through his own labor, and not with any desire to detract from or laud any ready-made pharmaceutical preparation of the market. He says: "I leave entirely out of the question the solubility of pills as examined by experimental tests in various solutions, simply stating that my experience has been at variance with that of most writers on the subject. Physicians and pharmacists, as a rule, yield the first place in the list to the uncoated pills of the shop." I propose to qualify this by adding "when recently made with suitable excipients." I have known numerous instances in which the uncoated pills have passed through the intestinal canal entire, acting only as mechanical irritants. In

considering the merits of coated pills two points have prominence:

First, The material which composes the coating.

Second, The method of preparation.

The sugar with which pills are coated is, or ought to be, of itself, freely soluble. The method of application implies that the pill must first be hard. The baking process which accomplishes the coating does not tend to leave the pill soft. The balsamic coat which is often applied to prevent staining the sugar coat, and the wax-like polish of the exterior to please the customer's eye, are additional hindrances to the ready assimilation of the pill. The writer has known sugar-coated pills of the best manufacturers to be passed entire. I have never inclined toward compressed pills, since the pressure necessary to a perfect shape makes the pill a small bullet, which requires considerable time for the energy of a disabled stomach to produce disintegration. The writer's largest personal experience has been with gelatine-coated pills, made in his own laboratory. Mr. Holmes, without describing his method of coating pills, says he has been very generally successful. In the case of morphia, quinia, and compound cathartic pills he has found the system to respond "in as short a time as it would to the drug administered in any other form." The writer coats his pills *freshly* made, and objects to all excessive drying, baking, and extreme pressure.

He says "a pill can be made, coated, and dispensed in an hour's time, if necessary, by any pharmacist, without any outlay. Fifty cents and a moderate amount of ingenuity will afford apparatus sufficient to coat one hundred pills at a time." Mr. Holmes said he would gladly demonstrate his method in detail to any pharmacist applying to him.

Third Session.

The Association convened at 9 A.M., Vice-President Baker in the chair. The report of the Committee on Trade Interests was presented by Mr. Geo. H. Arnold, and led to discussion on the internal revenue law and its application to the drug business. The subject of low prices as a result of competition was discussed, but the Committee's recommendation (that the Association set up a schedule of prices through a committee) was not adopted.

PROGRESS OF PHARMACY.

The Committee on Pharmacy and Queries made report through its Chairman, Mr. R. K. Smithers. From this able report we quote:

"It is scarcely necessary to say that during the past year the Empire State has kept pace with the times in pharmaceutical advancement. The College of Pharmacy, ranking among the first in the world, has graduated a large class from their high standard of qualification. Of all the States in the Union New York contributes by far the largest active membership to the American Pharmaceutical Association, while our own New York State Pharmaceutical Association, in its brief existence of two years, comes to the front with a membership of nearly double that of any similar organization in the country. In addition to this, we now have local pharmaceutical societies in Saratoga, in Kings, Monroe and Erie counties, which are doing some excellent work in research and original investigation, and the establishment of a College of pharmacy in Western New York, in connection with Buffalo University and under the auspices of the Erie County Pharmaceutical Association, is now under contemplation.

METRIC SYSTEM.

"The question of a general adoption of the *metric weights* or *measures* is one that has, of late, attracted much attention and elicited considerable discussion in pharmacy circles in this State. From what your committee have been able to learn, but little progress has been made in that direction, so far as it applies to the prescription department. The great difficulty appears to exist in the reluctance of physicians to change the method of writing their prescriptions, many of the older ones considerately claiming that the old way is good enough, while some of the more progressive hesitate to employ the 'metric' because apprehensive that the recipe might fall into the hands of a dispenser unversed in the system and result in serious error. More than a year ago the Buffalo Medical Club, an intelligent and progressive society of practising physicians, resolved to employ only the metric system in their prescriptions. At the present time perhaps one-half continue to adhere to it, but it is generally evident, from the fact that their combining proportions are figured to correspond with the divisions of the old apothecaries' table, that the mental inception and phraseology of the formula are still based on that system.

EDUCATION.

Your committee take the liberty of introducing for your consideration the subject of pharmaceutical education, and respectfully request that it would be conducive to the elevation and advancement of our profession that greater discrimination be exercised in the selection of youths taken into our pharmacies. The rule is that they find their way into the retail drug store as errand boys, without any special reference to their adaptability to the profession, frequently without even the groundwork of a good English education (to say nothing of classics), and sometimes without any particular desire to be instructed in the arts and mysteries, their main object being to obtain the maximum pecuniary remuneration (which, it may be added, is not generally magnificent).

"The employer having no assurance that he will reap the benefit, takes no interest in his advancement beyond investing him with the responsibilities of the bottle-room or instructing him in the scientific manipulation of the inevitable soda fountain; and the incipient pharmacist is left to glean what he can, at best but an imperfect and superficial knowledge of the business. We would recommend therefore a more general adoption of the old-fashioned system of apprenticeship as affording a combination of theoretical and practical instruction invaluable to the pharmacy students who are unable to avail themselves of a collegiate course. Your committee deplore the action of the *Sixth Decennial Pharmacopœial Convention* in defeating the proposition to introduce into the revised Pharmacopœia a

TABLE OF MAXIMUM DOSES,

and yielding to the influence of certain physicians in the convention by excluding from the work all discussion of therapeutic doses and toxicology. That it is important for a dispensing pharmacist to be versed in doses and toxicology requires no argument to establish; it is probable that every member of considerable experience present can recall instances in which his possession of just this knowledge has saved the life of his customer and the reputation of the physician from the result of erroneously written prescription. What then, can be the reasonable objection to publish in connection with our Pharmacopœia a table of adult doses, compiled by competent dispensers, against over-doses, which could be accepted as standard, would always be at hand, and infinitely more reliable than the incomplete and conflicting statements of individual authors upon which we should otherwise be obliged to depend? Should we be so fortunate as to secure the State Pharmacy Bill, for which many of us have so industriously labored, your committee suggest that it would be practicable for the Board of Pharmacy, thereby constituted, to jointly prepare a list of maximum doses which would be accepted as official throughout the State. A suitable number of these could be published in convenient pamphlet form and at small expense by our association and distributed freely amongst the members, who would then frequently go so far as to effect an understanding with their prescribers that these doses will not be exceeded without some mark or special understanding.

UNIFORMITY IN STRENGTH OF FORMULAS.

In connection with the revision of the pharmacopœia for 1880, much discussion has arisen over the annoying lack of uniformity in the irregular, hap-hazard formula of the old work. The percentages of active ingredients in the

various officinal preparations have been tabulated; and we find for example in the tinctures, 2—cantharides and capsicum—have a 4% strength, 23 approximate 10%, and a few approach to the strength of a fluid extract more than we are wont to expect in a tincture. In the 7 officinal liquid preparations of opium the opiate strength varies from less than ½ of 1% in the camphorated tincture, to 4% in the vinegar, and thus throughout the entire list of the preparations on the shelves of the pharmacies of to-day the same arbitrary and inexplicable disparity of strength exists, with the single exception of the more modern fluid extracts, a class of remedies which owe much of their popularity to the very fact or their uniform composition. Two different systems have been advocated to supersede this state of chaotic irregularity: 1st, that of an equalization of the posological strength, so that a given weight or measure of an entire class of Galenical preparations will contain in each case an average dose of the respective active constituent. Among the advantages claimed for this plan is that of simplicity and convenience to the prescriber, in obviating the necessity of memorizing an enormous and constantly increasing list of incongruous doses varying from a fraction of a grain to several troy ounces which, under the present arrangement, is so appalling to the young practitioner and necessitates frequent reference, even by the most experienced. That this would be an improvement on the no-system admits of no doubt, but it is generally conceded that making the dose the standard invests the preparation with an individuality which should belong only to the drug itself. A more scientific and acceptable method is that of equalizing the strength by allotting to each of a class of preparations the same uniform fixed percentage in its active constituent."

DELEGATES.

It was decided that the president-elect be the authorized delegate of the association to the forthcoming International Convention in London, England, with power to appoint a substitute.

It was also resolved that the chairman appoint a committee of three to visit the Pennsylvania State Association in Williamsport, the second Tuesday and Wednesday of next month. Messrs. D. C. Packard, Frank Knapp, and T. J. McMahon were designated the committee.

REPORTS.

The treasurer, Mr. Wm. Blaikie, through the secretary, reported that the receipts during the year were $784, and expenses $752.66; that all debts were paid and there was a balance on hand of $448.33. The report was received with thanks, and referred to the Executive Committee.

Secretary Clay W. Holmes submitted his annual report, from which we learn that: There were elected at the last meeting one hundred and thirty-two new members, making a total membership of three hundred and forty-nine. During the year three have died, leaving three hundred and forty-six at present on the roll. There were issued during the year eighty-nine certificates of membership, nineteen to members elected in 1879, seventy to those elected at the last meeting.

AMENDMENTS.

Several amendments to the constitution and by-laws made last year were discussed and adopted. The most important changed the time for holding the annual convention to the second Tuesday and Wednesday in June.

An amendment to the constitution intended to simplify the business of the association in the future was offered by Mr. Packard, and laid over until next year according to the rules.

OFFICERS AND NEXT MEETING.

The election of officers was next in order and resulted as follows:

President—Dr. A. B. Huested, of Albany.
Vice-President—J. H. Eaton, of Syracuse.
Second Vice-President—R. K. Smithers, of Buffalo.
Third Vice-President—C. K. Brown, of Deposit.
Secretary—Clay W. Holmes, of Elmira.
Local Secretary—Charles H. Gaus, of Albany.
Treasurer—Charles H. Butler, of Oswego.

Albany was selected as the next place of meeting, in preference to New York or Brooklyn, from both of which cities invitations had been received.

The Executive Committee was re-elected.

The following were elected delegates to the forthcoming convention of the American Pharmaceutical Association at Kansas City, with power to name substitutes:

P. W. Bedford, of New York; George J. Seabury, of New York; C. M. Lyman, of Buffalo; T. J. McMahan, of New York; H. W. Atwood, of New York.

A complimentary vote was tendered the first Vice-President, Dr. G. M. Baker, of Brooklyn.

The following

NEW MEMBERS.

were elected:

Levi B. Curtis, Ithaca; Wm. Philip Neele, Syracuse; Wm. Y. Robinson, Nunda; Fred. S. Coburn, Syracuse; Brewster S. Brown, Oneida; James V. D. Coon, Olean; Peter S. Siener, Rochester; Herbert W. Austin, Glens Falls; Fred. H. Loomis, Woodhull; Frank W. Drake, Buffalo; Henry S. Sloan, Binghamton; J. B. Sackett, Tarrytown; Chas. Bricher, Syracuse; F. D. Otis, New York.

Fourth Session.

The Association met at 10 o'clock Friday morning, Vice-President Baker in the chair. After the reading of minutes, the new-elected officers were installed.

Telegraphic greetings were received from the Pharmaceutical Associations of Kentucky, Ohio, and New Jersey, all of which were simultaneously in session. After some discussion on the proposed pharmacy law, the following were appointed a committee to urge its passage: A. B. Huested, Albany; I. Rieffenstahl, Buffalo; A. J. Inloes, Binghamton; I. A. Arnold, Cortlandt; and R. E. Phillips, Fulton. The Chair also announced the following Committee on Trade Interests: Oscar Oldberg, New York; F. K. Sweet, Lockport; H. W. Atwood, New York; on Pharmacy and Queries: W. L. Dubois, Catskill; W. J. Brewster, Hannibal; I. Frazier, Brockport; delegates to Vermont Pharmaceutical Association: D. C. Packard, Watertown; C. H. Fish, Saratoga; E. Post, New York. Fifty dollars was appropropriated to the Secretary for his services for the current year.

PAPERS AND QUERIES.

Dr. A. B. Huested, of Albany, then read a paper on Emulsions with Mucilage of Irish Moss, which will be found on page 194.

To the query "Is it advisable to substitute vaseline for lard in the preparation of ointments?" Mr. Geo. H. Arnold made reply.

The writer's answer is in the affirmative, and in this he includes the ointments prepared from the various petroleum products called by various manufacturers Vaseline, Cosmoline, Petrolina, etc. Ointments of all kinds, except mercurial, were prepared and left uncovered, exposed to light and air for a year, and were found then to be in good condition.

To the query "Can infusions and decoctions be converted, without detriment to their ultimate therapeutical effect, into concentrated forms of a stable character, so that these new forms may be employed for the rapid extemporaneous preparation of the original infusions and decoctions?"

The writer's experience and experiments led him to a negative answer to this query; the principal objection being the long-continued use of heat. Also the inability to preserve the preparations without addition of alcohol or other substances. The writer did, however, employ fluid extracts to obtain the desired preparations with the following results:

Preparations where the officinal process gave better results:

Infusum Buchu, Infus. Cinchonæ flava; Infusum Digitalis, Infus. Krameriæ, Infus. Pruni Virg., Infus. Serpentariæ, Infus. Valerianæ, Infus. Zingiberis.

Decoctum Cornus Floridæ.

Preparations which were satisfactorily prepared with fluid extracts :

Infus. Calumbæ, Infus. Pareiræ, Infus. Rhei, Infus. Sennæ, Infus. Spigeliæ, Infus. Taraxaci, Decoctum Chimaphilæ, Decoctum Cinchonæ fluid., Decoctum Dulcamaræ, Decoct. Sarsaparillæ Comp., Decoct. Senegæ, Decoct. Uva Ursi.

In summing up the results of the experiments, he finds that five of the fourteen infusions and six of the seven decoctions may be satisfactorily prepared from fluid extracts. He disagrees with Mr. Saunders (Pro. Am. Pharm. Ass., 1879) in the conclusions reached with Infusions of Cinchona, Digitalis and Krameria, and Decoction Cornus.

Query No. 14.—"Is the Benzoate of Sodium of Commerce prepared from natural or artificial acids?" Answered by Prof. P. W. Bedford.

The writer has examined samples of different manufacturers, and finds that in almost every case they are made from true benzoin-benzoic acid. In only two instances was hippuric-benzoic acid employed. It is asserted that a considerable quantity of toluol-benzoate of sodium is manufactured, but if this is the case, the writer had failed to find any from producers, either American or foreign. Specimens of benzoate of sodium prepared by himself from each of the sources named were exhibited. In general appearance there is no difference perceptible to the eye in the sodium salts prepared from either of the three varieties of acid. There is a slight difference in the odor when bottles are freshly opened. The toluol-benzoate shown has an odor of nitro-benzole, but not strongly characteristic in this respect. An objection to toluol-benzoic acid is that it carries into the sodium salt contaminations of chlorinated substances, the principal one being chlorobenzoate of sodium, of which as much as fifteen per cent has, in some instances, been detected.

MEMBERS IN ATTENDANCE

who signed register :

P. W. Bedford, New York ; G. M. Baker, Brooklyn ; F. Hamilton, Syracuse ; Henry Napier, Dryden ; Clay W. Holmes, Elmira ; W. L. Brown, Syracuse ; F. L. Norton, Delhi ; Clark C. Otis, Binghamton ; K. K. Smither, Buffalo ; A. J. Inloes, Binghamton ; Chas. K. Brown, Deposit ; Thos. H. Salmon, M.D., Lansingburg ; George E. Ferguson, Albany ; James A. Darlington, Buffalo ; William Coulson, Buffalo ; R. E. Phillips, Fulton ; A. B. Huested, Albany ; O. D. Baldwin, Fredonia ; Charles H. Gaus, Albany ; C. H. Butler, Oswego ; H. E. Eaton, Syracuse ; J. H. Rogers, Oneida ; E. Eugene Smith, Syracuse ; F. E. Campbell, Red Creek ; E. D. L. Robinson, Hornellsville ; E. E. Philpott, Niagara Falls ; R. H. Hoff, Port Byron ; William Howarth, Jr., Utica ; C. C. Lefler, Utica ; W. J. Brewster, Hannibal ; William H. Hyler, Port Chester ; E. F. Jennings, Cortlandt ; P. P. Hazen, Cornwall, Orange County ; Charles W. Sackett, Addison ; G. Ramsperger, Brooklyn ; George E. Zimmerman, Edward A. Crowley, Rochester ; George Inness, New York City ; F. K. Sweet, Lockport ; Willard N. Smith, Auburn ; T. L. Corwin, Marathon ; G. H. Arnold, Cortland ; Isaac C. Chapman, Newburgh ; D. C. Packard, Watertown ; E. W. Morse, Oswego ; LeRoy D. Oatman, Henry J. Penfold, Angola ; A. McIntyre, Oswego ; D. F. Kendell, Little Valley ; Wm. L. Dubois, Catskill ; W. B. Fuller, Lacona ; John L. Shrader, Wappinger Falls ; H. Scoville, Tonawanda ; J. W. Bachman, Hornellsville ; F. M. Bishop, Holley ; Oscar Oldberg, New York City ; G. H. Fuller, Pulaski ; Emanuel Rommel, Suspension Bridge ; Willard A. Smith, Richfield Springs ; A. J. Atwood ; Hoosick Falls ; E. Post, Brooklyn ; Allen H. Still, New York City ; Geo. J. Thurston, Buffalo ; Geo. Seabury, New York ; Wm. P. DeForrest, Brooklyn ; Edward A. Sayre, Brooklyn ; Jas. H. Eaton, Syracuse ; Louis E. Nicot, Brooklyn ; A. B. Bishop, Warsaw ; T. S. Trowbridge, Buffalo ; Frank F. Knapp, New York ; Hermon W. Atwood, New York ; Thos. J. Macmahon, New York ; H. J. Menninger, Brooklyn ; Wm. T. Robinson, Nunda ; J. V. D. Coon, Olean ; G. R. Dutton, Honeoye Falls ; M. M. Maybury, Cortland ; Fred. H. Terry, Clyde ; Jacob W. Diehl, Buffalo ; John P. Diehl, Buffalo ; R. B. Vaughn, Buffalo ; Frank W. Drake, Buffalo ; Geo. Biles, Buffalo ; I. Rieffenstahl, Buffalo ; G. Bastian, Danville ; C. M. Lyman, Buffalo ; A. J. Shapaker, Buffalo ; Horace P. Hayes, Buffalo ; Bernard Osann, New York ; Dundas Dick, New York ; Eugene Barnes, Tarrytown.

Delegates from Pennsylvania Pharmaceutical Association : Chas. A. Heinitsh, Lancaster, Pa. ; V. E. Shaw, Eldred, McKeon Co., Pa.

KENTUCKY STATE PHARMACEUTICAL ASSOCIATION.

THE fourth annual convention of the Association occurred at Louisville, on the 18th of May, in the Louisville College of Pharmacy, a large number of delegates from different portions of the State being present.

Following the opening of the meeting, Mr. J. A. Flexner, Chairman of the Reception Committee, welcomed the Association in behalf of the druggists of the city. The President, Mr. M. H. Webb, of Simpsonville, then delivered an address, which was referred to a committee, consisting of Messrs. V. Davis, P. F. C. Biehl, and P. Nodler.

Prof. C. L. Diehl, Chairman of the Entertainment Committee, reported that he had received communications from the Bremaker-Moore Paper Company, the Newcomb-Buchanan Distilling Company, the Pictet Artificial Ice Company, and the Board of Trade, inviting the Association to visit their various establishments at its convenience. The invitations were accepted unanimously.

REPORTS OF COMMITTEES.

The Secretary being absent, the reading of his report was postposed until the next session. Treasurer Nodler, of Covington, made the following report of the financial transactions of the Association for the past year :

Receipts, $241 ; disbursements, $150.82 ; balance on hand, $91.18.

The report of the Executive Committee was made by Mr. F. C. Miller. Both reports were referred to the proper committee. The Committee on Papers and Queries reported a paper from Mr. F. C. Miller, in answer to the following query propounded at the last annual meeting of the Association :

"Ought the attendance at some school of pharmacy be made an obligatory part of apprenticeship, and why?"

In order to answer Query 3 conscientiously, it was necessary to examine into the condition of pharmacy in general, and in our country in particular, together with the facilities afforded apprentices for acquiring a thorough knowledge of pharmacy in the pharmacies or drug stores in which their apprenticeships are served.

Upon surveying the pharmacy of the world, we find that even in Europe there is not the opportunity afforded the apprentice to acquire a scientific knowledge of pharmacy in the dispensing pharmacies of to-day, as was the case even thirty years ago. Owing to the gradual inroads made on the domain of the pharmacist of Europe by the large chemical manufacturing establishments, many chemicals are no longer made in the laboratory of the pharmacist. Consequently, even there the apprentices are gradually being deprived of practical scientific work, and the lectures of the various colleges and universities, where the branches of science of value to the pharmacist are taught, are more depended on for the acquisition of a scientific knowledge of pharmacy than formerly.

While the individual pharmacists of Europe, and especially in Germany, are yet far in advance of those of our country, it is as much owing to the high standard of education required on entering apprenticeship as any other factor.

The pharmacies there are still subject to annual inspection by a Government Board of Visitors. Young men must pass a rigid examination before they are allowed to practise, and the number of pharmacies is limited by law,

all of which tends to maintain the dignity of the profession and afford its votaries some amenities and social standing, while in France the *Ecole de Pharmacie* is authorized to examine first-class assistants, who are compelled to attend lectures. Now the opposite of these conditions prevail in our country in most places.

It is only in the larger cities where we find a few stores, the proprietors of which are able to have the necessary room and apparatus to prepare chemical and galenical products, and alas, but a few who take the trouble to prepare anything. This latter condition is largely owing to the great effort made by our large chemical and pharmaceutical manufacturing establishments, by extensive advertising, and personal solicitations made to the physicians, inducing them to prescribe *their* products, thus robbing the dispensing pharmacist of all incentive to manufacture.

Such being the case, in order to prevent the retrogression of pharmacy into the mere purchase and sale of commodities, institutions have been organized to teach the sciences necessary to pursue the profession with credit and respectability, so that the young men now entering the business can, if they choose, manufacture most of the preparations now in use, and finally establish a foundation on which to construct the ideal pharmacist—the professional man of science. And, further, by attending the lectures and securing a scientific knowledge of the business, they deprive the large manufacturer of chemical and pharmaceutical products of the fulcrum of their argument in persuading the medical profession to prescribe *their* preparations, namely, the inability of the dispensing pharmacist to make them.

As the future of pharmacy as a profession in our country depends upon the training of those now entering its ranks, it is of the utmost importance they should be thoroughly qualified; and as the colleges of pharmacy afford the means of securing the qualifications so needful, I have no hesitation, after having, as I think, given ample reasons, in saying that the attendance upon the lectures of some college of pharmacy should be made an obligatory part of apprenticeship.

The Business Committee reported the following applications for membership: S. S. Kirk and George N. Middleton, Shelbyville; H. H. Penkhaus and W. C. McRoberts, Stanford; F. Steockle, Covington; Henry Fabra, Falmouth; and F. J. Schweitzer, Henry Huecker, H. N. Volgt, M. C. Peter, Cary I. Warren, Worthington Robinson, O. A. Beckman, A. J. Elwang, of Louisville. On motion, the applicants were admitted to membership.

A majority of the Committee on Legislation not being present, the Chairman asked to be permitted to defer making the report until to-day. The Committee has studied the subject of pharmaceutical legislation very closely during the past year, and their report is looked for with much interest by the profession. They will suggest a number of changes in order to make its enforcement more practical, and it is said that the proposed changes will bring out some vigorous pharmaceutical oratory. A new law has been drafted by the Committee, which will be submitted to the Association for recommendation to the next Legislature, in which provision is made for the infliction of severe punishment upon any one who, by "adulteration or substitution, shall deteriorate the quality, commercial value, or medicinal effect, or alter the nature or composition of any drug, medicine, or pharmaceutical preparation so that it will not correspond to the recognized tests of identity and purity."

The meeting then adjourned until the 19th, at 10 o'clock.

Second Session.

The Association was convened at 10 A.M. on the 19th. A committee was appointed to draft memorial resolutions on the death of Mr. J. J. Frost, and report to the Executive Committee, which committee was instructed to print the resolutions on a memorial page in the proceedings of the convention.

The Committee on Legislation then made its report, embracing therein the draft of a bill to be presented to the next Legislature for enactment. The discussions on the various sections of the bill occupied the attention of the meeting for two hours, during which the legal safeguards that experience had taught the members to be necessary for the protection of the public were ably debated, after which the bill was adopted. During the discussion a telegram was received from the President of the New York Pharmaceutical Association, then in session at Buffalo.

The reading of the dispatch was received with applause, and a committee appointed to respond.

The Nominating Committee reported the following gentlemen as officers and members of the standing committees for the ensuing year: For *President*, C. S. Porter, Eminence; for *First Vice-President*, T. E. Bruce, Lebanon; *Second Vice-President*, E. Scheffer, Jr., Louisville; *Thira Vice-President*, R. H. Venable, Bardstown; *Recording Secretary*, W. G. White, Richmond; *Corresponding Secretary*, W. B. McRoberts, Stanford; *Treasurer*, Peter Nodler, Covington.

Executive Committee—V. Davis, C. I. Warren, and George A. Newman. *Committee on Papers and Queries*—George A. Newman, S. H. Ford, and C. L. Diehl. *Business Committee*—C. L. Diehl, W. A. McDowell, and Henry Fabra. *Committee on Legislation*—J. F. Kennedy, J. Oxley, and S. H. Ford.

On motion, an affirmative ballot was cast for the gentlemen named by the Nominating Committee, and they were declared elected.

The retiring President appointed V. Davis and W. Rogers a committee to conduct the newly-elected President to the Chair. Ex-President Webb then presented President Porter to the meeting.

The President elect addressed the Association, briefly expressing his surprise and gratitude at the honor conferred upon him, and his desire to advance the welfare of the Association.

A vote of thanks was tendered the drug trade of the city for the cordial reception they had given the visiting members, the Louisville College of Pharmacy for the use of its hall, and the press of the city for courtesies extended. On motion of C. L. Diehl, the convention adjourned to meet at Covington, Ky., in May, 1882.

ENTERTAINMENTS.

The members paid a visit to the Moore-Bremaker Paper Company's establishment before the assembling of the session, and were shown through the manufactory, and all the different processes through which the paper is taken were shown and explained. They were highly pleased with the visit.

At 2.30 o'clock in the afternoon the members met at the college. Omnibuses were in waiting, and made an excursion to the Newcomb-Buchanan distilleries, the Southern Dairy Company's factory, and the Pictet Ice Company's factory. At the distilleries they were shown through that immense cordon of establishments, which is the largest institution for the production of fine drinking whiskeys in the world, where 350 barrels of pure copper bourbon is turned out every day.

From there they proceeded to the factory of the Southern Dairy Company, where they were received by Mr. J. G. Barret, President of the Company, Mayor Baxter, City Engineer Scowden, and others, who escorted them through that gigantic establishment.

Mr. Barret conducted them to the apartment where the fat is received from the city butchers, and explained every process until the product comes out pure butter, which they were invited to put to actual test with crackers that had been provided. Those who had harbored a dislike for oleomargarine butter expressed their belief that it was the cleanest and purest butter they had ever tasted. From there they went to the Pictet artificial ice factory, where they saw blocks of artificial ice six feet long, two feet wide, and eight inches thick turned out in all its frigid beauty. Mr. C. L. Diehl entertained the members with a lengthy explanation of the processes by which the water was deprived of its latent heat and converted into ice. An

interesting part of the inspection was a cozy refreshment stand which had been provided for the guests. Mr. E. D. Davidson represented the ice company, and his kindness and efficiency in giving the members an opportunity to gain information on all points were highly appreciated. Mr. L. Gutermuth, of Preston and Caldwell streets, revived the drooping spirits of the visitors with some delicious Phœnix-hill beer, and Messrs. Wurach & Schultz had a sample of the same beverage from St. Louis in bottles, which sent the members homeward in highly elated spirits.

In the evening a supper was served at Ruffer's Hotel, after which numerous and enjoyable speeches were made to as many appropriate toasts.*

PENNSYLVANIA PHARMACEUTICAL ASSOCIATION.

THE Fourth Annual Meeting was held at Williamsport, June 14th and 15th, and was attended by about seventy-five members. Mayor Keller gave an address of welcome at the opening of the first session, and was briefly responded to by the President, G. W. Kennedy, of Pottsville.

The Executive Committee presented the names of sixty-four applicants for membership, who were duly elected, and at the subsequent sittings the number of new members was increased to 106.

On motion, Mr. T. J. Macmahan, of New York, was received as a delegate from the New York State Pharmaceutical Association, and accorded the privileges of the floor. The same courtesy was also extended to Prof. P. W. Bedford, who was present.

President Kennedy delivered a lengthy address, in which many topics, new and old, but all of some interest to pharmacists, were discussed. Subsequently the Committee to whom it was referred with the report of the Executive Committee, recommended that the following suggestions should be favorably acted on:

The employment of a stenographer; that delegates should be appointed to attend the annual or special meetings of pharmaceutical organizations in any of the adjacent States; that members should be elected at the annual meetings only; that the Executive Committee should annually prepare such biographical notices of deceased members as deemed proper, and that all new members be elected at the session subsequent to the one at which their names are proposed.

The Treasurer, the genial Lemberger, presented a cheerful report of finances, showing a balance on hand of $578.11, after paying all expenses to date; such a report was, of course, warmly indorsed.

The election of officers for the ensuing year resulted as follows: *President*, George A. Kelly, Pittsburgh; *Vice-Presidents*, Alonzo Robbins, Philadelphia, and Jesse B. Duble, Williamsport; *Treasurer*, Joseph L. Lemberger, Lebanon; *Secretary*, Jacob A. Müller, Harrisburg; and at a subsequent session, after Altoona had been chosen as the next place of meeting, Charles F. Randolph, of that city, was elected Assistant Secretary.

The *Second Session* was held in the evening, and after the seating of the new officers, the reports of committees were called for.

The Committee on Adulterations and Sophistications reported briefly that, in general terms, the condition of the drug market might be called very satisfactory; that few articles were, as a rule, adulterated, and sophistications were the exception. They condemned as immoral the degrading of scientific knowledge for the purpose of preparing sophisticated articles, such as factitious liquors. The committee believe that there is more material worthless from deterioration than from actual sophistication, and subsequently the title of the committee was altered by substituting the word "deterioration" in place of "sophistication." Prof. Maisch said he was convinced that in no markets of the world were drugs, medicines, and chemicals to be procured of better uniformity than in our own country.

The reports of several of the committees were read and took the usual course, but the one which created a considerable stir was that of the *Committee on Ethics*. This was presented by its Chairman, Mr. C. T. George, of Harrisburg. The code of ethics may be briefly noted as follows:

Sec. 1.—The United States Pharmacopœia is the standard and guide for all official preparations (unless in the prescription some other is indicated). *Sec.* 2.—Proprietary medicines may be kept and sold, but they should be discouraged, and we should neither advertise them nor permit our names to be used in this way.

Sec. 3.—While alcohol is valuable as a therapeutic agent, yet to make it a prominent feature of business is unprofessional, and the practice of allowing it to be used on the premises in any shape as a beverage is degrading.

Sec. 4.—Secret formulæ between physicians and druggists should be discountenanced.

Sec. 5.—Percentage to physicians is repudiated as derogatory to both professions.

Sec. 6.—Professional reputation of physicians should not be compromised, and we should be likewise protected by them.

Sec. 7.—Pharmacists should not give medical advice.

Sec. 8.—Pharmaceutical education should be encouraged in every possible way.

Sec. 9.—Provides for modes to endeavor to make this code of ethics of practical utility to the members.

Section 3 brought out considerable discussion, but was finally adopted by a unanimous vote. *Section* 4 carried some discussion as to what "secret formulæ" are, but otherwise the members present seemed very well pleased indeed with the code.

At the *Third Session* the time was chiefly occupied in reading replies to queries, volunteer papers, and comments on the topics thus brought forward.

M. C. L. Lochman, of Bethlehem, in reply to a query as to "What is the best plan of dispensing poisons so as to prevent mistakes?" suggested that order and regularity are the first requisites of safety to the pharmacist. The special precautions which may be added are, to have all dangerous medicines so kept that they may be apart from those which are indifferent or harmless in their action. When articles are handled which are dangerous, they should be so placed that the dispenser must again examine or notice them before replacing them in their proper places. Such articles should have some cautionary mark upon them. The mind should be trained to quickly calculate doses, and also to know the proper doses of the articles handled.

"Has that portion of resin of podophyllin soluble in water purgative properties?" Dr. H. Pursell, of Bristol, responded by a brief paper in which the detailed experiments prove that when resin of podophyllin is treated with water, either hot or cold, the clear solution will act as a purgative when about two grains of the solid is represented in a dose. The amount of the resin soluble in water is six per cent and more.

W. M. Thomson attributes the nauseous odor of valerianate of ammonia to the free valerianic acid which is usually present in the elixir, and asserts that when a neutral or slightly alkaline salt is used, the odor is almost unnoticeable. No formula was presented with this paper.

"The properties of *Rhamnus Purshiana* or so-called Cascara Sagrada are by some called laxative, by others cathartic, and it is said that mandrake is added to increase its activity."

Dr. L. Wolff, of Philadelphia, read a paper recapitulating what has been printed in the literature of this substance, and then gave some statements as to its medicinal activity. From these he asserts that it is a mild hydragogue cathartic, not requiring the addition of any other medicinal substance to produce such results; and that its laxative action is but the effect of the remedy in small doses.

* We are indebted for the foundation of the above report to the Louisville *Courier Journal*.—ED. N. R.

W. L. Turner, of Philadelphia, read a paper in response to a query as to "the effect that the manufacture of pharmaceutical preparations is having on the proper education and training of future pharmacists," in which he took the ground that our young men do not have the facilities they should in most stores, and gave some excellent advice as to the method of retrieving such errors.

In reply to query No. 10, Mr. Wm. B. Thomson, of Philadelphia, read an essay on the proper training of apprentices. This excellent paper cannot be epitomized advantageously, but the writer covered carefully the various points of education—mercantile, scientific, and ethical in which the apprentice should be trained, before being admitted to our calling. The duty of the *employer*, he holds, cannot be delegated to any educational institution, however good, but the student should be carefully drilled in the routine and practice of the store by his employer. The Colleges of Pharmacy are thought to be too anxious to secure and graduate large classes, and are not sufficiently rigid about exacting preliminary scientific education.

The writer gave a very excellent synopsis of the manner in which, under careful supervision of his employer, a young man might be made more efficient and useful than simply by "growing up" and "picking up" for himself.

In reply to query No. 11, Mr. Charles T. George, of Harrisburg, gave the results of some careful investigations of Extracts of Meat, as now found for sale. The mode of operation is to determine "the loss of moisture, the amount of solids soluble in 80% alcohol," and the amount of ash. The following results were obtained:

	Loss of Moisture.	Dry Extr.	Soluble in Alc.	Ash.	1 Dram Dry Ext. Costs.
Liebig's Extract, p. c.	20	80	66	14	4½ c.
Valentine's Meat Juice, p. c.	66.6	33.3		7	16
		Dry Muscular Fibre.			
Johnston's Fluid Beef, p. c.	37	30	33	10	6½

This extract should not be put into any but glass or earthen cans, as some that was tested was taken from tin cans, and whenever it was taken from the outer surface of the mass, where it had been in contact with tin, the analysis gave conclusive proof of the presence of the metal, in many instances in considerable quantity.

Mr. W. M. Thomson, of Philadelphia, read a short paper on emulsions, stating that the paper of Mr. A. W. Gerard, which had been published in most of the journals, was so complete and satisfactory that nothing could be added to the subject.*

In reply to Query 13, as to "the value of formic acid as an antiseptic," Dr. L. Wolff, of Philadelphia, gave the results of a series of comparative experiments between formic acid, glycerin, boracic acid, benzoic acid, carbolic acid, thymol, and salicylic acid, and noted that when extract of malt diluted with four parts of water was used fermentation began in 48 hours. With the addition of a small quantity of the articles named above, it required, in the order given above, 96, 72, 108, 144, 240, 326, 432 hours, showing salicylic the *best* and formic acid the *least* valuable. To test its value as an antiputrescent, white of egg diluted with an equal bulk of water was tested with the same substances. When the simple mixture of albumen and water was exposed it did not decompose until the fifth day; with the addition of articles enumerated above in their order, decomposition set in at the end of 3, 4, 9, 16, 30, 26, 24 days, showing thymol as the best antiputrescent, and formic acid as of no value compared with the other antiseptics or antiputrescents.

In reply to query No. 14, "Are druggists careful to examine the weights used in compounding their prescriptions?" Mr. Geo. W. Stœckel, of Reading, reported that he had noticed with care the balances and weights used in over one hundred and fifty drug stores, and regretted to say that in not more than twenty per cent of the stores were they fit to be used in weighing any smaller quantity than two grains.

Gustavus Pile, of Philadelphia, read a brief but valuable paper on the weight of a liter of water at different temperatures. He said that as the proper standard was 15,432.3 grains of water at 39° F. was the equivalent of a liter, it followed that at the temperature of 60° F. the expansion of water or any other liquid would cause it to weigh less. He submitted a table giving the actual and *true* weight of a liter of water at the several specified temperatures:

Temperature.	*Weight.*	*Cubic Centimeters.*
39°	15,432.3	1,000.
45°	15,430.7	999.9
50°	15,429.1	999.8
55°	15,424.6	999.5
60°	15,418.4	999.1
65°	15,410.7	998.6
70°	15,403.	998.1
75°	15,393.7	997.5
80°	15,382.9	996.8
85°	15,370.6	996.

Prof. J. M. Maisch read a paper on "The Stearoptene of Oil of Buchu." He reviewed the statements of various writers as to the yield of oil, and the examinations of the same. Prof. E. S. Wayne having noted a crystallization, and subsequently testing the same, suggested the presence of salicylic acid. Prof. Maisch afterwards obtained from other persons similar crystallizations obtained in the distillation of buchu residues. His experiments prove that the stearoptene from oil of buchu obtained from known species of buchu does not contain any trace of salicylic acid or its derivatives, though the crystals given him from some of the residues give such a reaction. These leaves he could not learn anything of, and his opinion is that the salicylic acid comes either from some accidental admixture of other leaves or of some as yet undetermined species of buchu.

Prof. J. P. Remington, at the request of the Committee on Apprentices to the Drug Business, read a very able paper on what the course of employers should be relative to selection of young men desiring to learn the business. The writer took the ground that character, industry, and a fair education should in every case be insisted on. A novel feature of his paper is a specimen of the indenture used a century ago in "placing" young men to learn the business.

"This indenture witnesseth that John Hart, son of Seymour Hart of the northern Liberties of the City of Philadelphia, hath put himself and by these Presents with the advice and consent of his said Father doth voluntarily of his own free will and accord, put himself apprentice to Townsend Speakman, of the city of Philadelphia, Druggist, to learn his art, Trade and Mystery, and after the manner of an apprentice to serve him, the said Townsend Speakman from the Day of the Date hereof, for, and during, and to the full End and Term of six years, five months and Eleven days next ensuing. During all which term, the said apprentice his said Master faithfully shall serve, his secrets keep, his lawful commands everywhere readily obey. He shall do no Damage to his said Master, nor see it done by others, without letting or giving Notice thereof to his said Master. He shall not waste his Master's goods, nor lend them unlawfully to any. He shall not commit Fornication, nor contract Matrimony within the said Term. He shall not play at Cards, Dice or any other unlawful Game, whereby his said Master shall have Damage. With his own Goods, nor the goods of others, without license from his said Master he shall neither buy nor sell. He shall not absent himself Day nor Night from his said Master's service without his leave; Nor haunt Ale houses, Taverns, nor Play-Houses; but in all Things behave himself as a faithful Apprentice ought to do during the said Term. And the said Master shall use the utmost of his Endeavour to teach or cause to be taught or instructed the said Apprentice in the trade or Mystery of a Druggist," &c., &c.

* See NEW REMEDIES, Vol. IX.

. . . . . .

Perhaps still more singular may seem the fact that Drug apprentices, in 1751, could be bought and sold in the city of Philadelphia.

"In consideration of sixteen pounds I do assign the within named apprentice to serve James James and assigns the remaining part of his time. Witness my hand, July 26th, 1751."

This has the attesting signature of the Mayor of Philadelphia.

This paper also states that the neglect of druggists of the present day to use the care in teaching their apprentices that they should, entails on the Colleges of Pharmacy trouble by making it necessary at no distant day to insist on preliminary examination before admitting students to the advantages of the lectures.

Mr. C. T. George read a very excellent paper on local formulas, and with it made one of the most interesting exhibits of this or any similar State gathering. It consisted of a very complete line of articles, including fluid extracts, elixirs, syrups, solid extracts, powdered extracts, oleates, purified oleic acid, and numerous other articles of value to the pharmacist. It is just this sort of exhibit which will or should be the result of our State pharmaceutical meetings, and ought to be a great advantage to pharmacists who attend, as also to students learning the business.

The remaining business of the sessions was mainly the action of the Association on various reports of committees and delegations to similar bodies, and the naming of various committees for the ensuing year.

Amendments were adopted requiring in future that members should have at least three years' experience, and be over twenty-one years of age. A motion was adopted authorizing the Assistant Secretary to exclude from the exhibition, next year, all proprietary articles and those which might be objectionable in character.

Resolutions of thanks to the druggists of Williamsport for their attentions, and to the exhibitors for their labors and the very creditable display of articles were adopted.

During the stay at Williamsport the visiting members and ladies were taken to visit the peculiar institution of the town, "the boom" (*which is not stocks*), but which is one of the largest interests in connection with lumber, in the eastern half of this continent.

A party visited Watkin's Glen on Thursday. The meeting was an excellent success—in attendance, about seventy-five members present; in papers, which were of unusual merit; in the interest occasioned by the exhibit, and in the general good feeling manifested by all present. We defer any notice of the exhibit until next month owing to lack of space at the late hour at which this report reaches us.

Board of Pharmacy of the City and County of New York.—The term of office of the Board of Pharmacy, elected in June, 1878, having expired on Monday, June 6th, 1881, a special meeting of the College of Pharmacy was held on the last mentioned day for the purpose of electing a new board. Previous to the election, the Secretary of the board, Dr. William Balser, presented a report, of which the following is an abstract.

The whole number of registered pharmacists in the City and County of New York is 1,620, of which 711 are proprietors and 909 are assistants. During the last three years 231 pharmacists were registered, of which 89 were proprietors and 142 assistants. The board, during its term, held 30 examinations and 16 stated and special meetings. 166 candidates presented themselves for examination, of which 54 failed to pass, or 32.5%. The total receipts of the board during the three years were $931.00, as follows: examination fees, $605.00. Registration fees from proprietors, $178.00. Registration fees from assistants, $148.00. The expenditures during the same time were $889.77.

The examinations were held orally, and the subjects of examination were as follows: 1. *Pharmaceutical Chemistry* and *Preparing Physicians' Prescriptions*. Examination in this department is of an entirely practical character, excluding chemical theories and explanations of complicated processes. Candidates are required to read and explain a number of prescriptions of different physicians and to describe their mode of preparation. There are also submitted to them various formulæ containing anomalies in doses, incompatibles, or other matters requiring the exercise of judgment. 2. *Materia Medica*. In this department the candidate is required to recognize specimens of officinal drugs and chemicals, particularly those which are liable to be mistaken for each other. In the case of vegetable drugs, the candidates are also required to give the botanical and officinal name, the habitat, the adulterations or sophistications likely to be met with and their distinctive characteristics, the officinal preparations and their doses. 3. *Pharmacy*. In this examination the candidate is required to be acquainted with the preparations of the U. S. Pharmacopœia, the officinal and the metric weights and measures; also with the various manipulations occurring in the exercise of practical pharmacy and the preparations of physicians' prescriptions; also to give the composition and ingredients of important preparations, their mode of preparation and tests for strength and purity. 4. *Toxicology and Doses*. The examination in this department is confined to the preparations of the U. S. Pharm., and to such unofficinal preparations as are in common use. The U. S. Dispensatory is followed as the standard for doses, the average between the smallest and largest—where practicable—being adopted. The candidate is also required to state the characteristic effects of an overdose of the different poisons, together with their antidotes, and the method of preparing and administering the latter. The estimation of the answer in each department and the computation of the total standing of the candidates was carried out according to the by-laws of the board in the following manner. Each question was valued "10," and the answers were rated, in proportion, from 10 down to 0. The lowest passing number was 24, that is at least 6 from *each* examiner.

The election, held subsequently to the reading of the report of the Secretary, resulted in the choice of the following gentlemen, who will constitute the Board of Pharmacy for the ensuing three years: Prof. Walter De F. Day, M.D., William Balser, M.D., Benjamin F. Hays, M.D., Theobald Frohwein, Starr H. Ambler.

North Carolina Pharmaceutical Association.—The Second Annual Meeting of this association will be held in New Berne, on August 9th. Mr. T. C. Smith, of of Charlotte, is *Secretary*. Mr. F. W. Hancock, of New Berne, will attend to all local business, such as taking charge of exhibits, etc.

The Governor of the State has appointed the following gentlemen as the *Board of Pharmacy* for the State of North Carolina: William Simpson, of Raleigh; W. H. Green, of Wilmington; A. S. Lee, of Raleigh; E. M. Nadal, of Wilson; E. H. Meadows, of New Berne.

American Pharmaceutical Association.

THIS Association adjourned last year to meet again on the fourth Tuesday (23d day) of August, 1881, at Kansas City, Missouri.

As this point is the farthest west that a meeting has been held, and is a prominent railroad centre, it is expected that a large gathering of pharmacists will take place, and many new members from beyond the Alleghanies join the Association.

The Local Secretary, Wm. T. Ford, reports that arrangements are being made with the various railroads for reduction in rates, and the Local Committee have secured a place for the exhibition which promises to be very fine.

A trip to Colorado and Utah or New Mexico is in contemplation at much less than the ordinary cost, which, with the interesting reports of the various committees and

original papers in answer to queries, should induce the attendance of all who can possibly leave home.

Further particulars will be given in the circular of the Secretary, John M. Maisch, Philadelphia, who will also mail blank forms of application to those intending to become members. JAMES T. SHINN, *President.*

Pharmacy Boards of the United States and Canada.

IN furtherance of the objects of the different pharmacy boards throughout the United States and Canada, as enunciated at the Saratoga meetings last September;

All pharmacy boards are invited to send accredited delegates to meet at Kansas City, at the time of the twenty-ninth annual meeting of the Am. Pharm. Association, Aug. 23d, 1881, when a report of the Committee on Permanent Organiation will be submitted.

The subject of a minimum standard for the examinations will be open for discussion with a view to the adoption of some measures that will tend to harmonize the various pharmacy laws, to enable one board to recognize the certificate of another board without re-examination.

To harmonize the action of different boards and to give mutual aid to each other in the discharge of our duties as Commissioners of Pharmacy, it is suggested that an interchange of laws, printed forms, rulings, regulations, and opinions be made through the Secretary, who will be pleased of board action at the earliest convenience.

As they were fifteen different boards represented at Saratoga, it will take about twenty-five complete sets of printed forms, etc., to make a satisfactory exchange at Kansas City.

CHAS. A. TUFTS, *Pres't*, Dover, N. H. GEO. H. SCHAFER, *Sec.*, Fort Madison, Iowa.

The Ohio State Pharmaceutical Association, at its meeting held in Toledo, on the 18th and 19th of June, elected the following officers for the ensuing year: *President*, J. H. Reed, of Toledo; *Vice-Presidents*, T. L. A. Greeve, of Cincinnati, and J. N. McCoy, of Kenton; *Secretary*, Lewis C. Hopp, of Cleveland; *Treasurer*, Charles Huston, of Columbus; *Executive Committee*, J. M. Ayers, of Cincinnati; F. W. Schneller, of Columbus; and Thomes Van Stone, of Toledo.

The following Committees were appointed by the President: *Trade Interests*, Daniel Myers, of Cleveland; Jas. M. Colwell, of Urbana; W. Carothers, of Carey; *Papers and Queries*, N. Rosenwasser, of Cleveland; W. R. W. Sulliger, of Forrest, and Phil. Hoglan, of New Comerstown; *Pharmacy Laws*, J. A. Nipgen, of Chillicothe; W. H. Haven, of Findlay; J. H. Wahreshoff, of Delphos; C. A. Smith, of Springfield; and W. Ruff, of Toledo.

St. Louis College of Pharmacy.—At the meeting of the Board of Trustees, held Tuesday May 17th, 1881, the following Committees were appointed for the ensuing year:

Committee on Library: W. B. Addington, W. C. Bolm, and F. F. Reichenbach. Committee on Cabinet: George Ude, Gustav Koch, and Chas. Gietner. Committee on Examination: George Ude, Gustav Koch, and H. E. Hoelke. Committee on Prospectus: F. W. Sennewald, S. Boehm, and W. C. Bolm.

This Committee was instructed to examine the suggestions of advancing the fees for the ensuing year, also to consider the necessity of changing the night lectures to day lectures. Upon motion, the following gentlemen were re-elected by acclamation for the ensuing year:

O. A. Wall, M.D., Ph.G., *Professor of Materia Medica;* Chas. O. Curtman, M.D., *Professor of Chemistry;* James M. Good, Ph.G., *Professor of Pharmacy.*

W. C. BOLM,
Corresponding Secretary.

ST. LOUIS, MO., May 18th, 1881.

Cinchona.—CONSUL RANDALL, of Sabanilla, writes to the Department of State that only 19,794 bales of Peruvian bark were shipped to New York in 1880, against 33,560 bales in 1879, being a decrease of 13,766 bales, or a decrease in value of $688,300.

NOTES, QUERIES AND ANSWERS.

Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us, as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue. Unless special instructions to the contrary accompany the query, the initials of the correspondent will be quoted at the head of each answer.

When asking for the formula of an unusual, patented, or proprietary compound, always accompany the query with any information you may already possess regarding the locality in which it is used, its use and reputed effects, in order to enable us to make inquiry without waste of time and labor. When it can conveniently be done, send also a specimen of the label used on packages of the compound.

No. 902.—**Benzoic Acid from Urine** ("A. W.").

There are various manufacturers of this artificial acid in Germany. We have noticed a recent advertisement of the "Chemische Fabrik Brötzingen" in Baden, which offers fine sublimed urine-benzoic acid at 11 *marks* per kilo. Further information will be furnished you on applying to de Haen, List vor Hannover; or Gehe & Co., Dresden, Saxony.

No. 903.—**Cement for Vulcanized Rubber** (H. J. S.).

As a rule, torn vulcanized rubber cannot be cemented together so as to have its previous elasticity. Syringe-bulbs and other articles of this kind, when torn or ruptured, are better at once thrown away, since we have found that it does not pay to try mending them.

No. 904.—**Cure for Snake-Bites** (E. H. W. H., Ga.).

The plant which you send is *Chamælirium luteum* Gray (*Helonias dioica* Pursh.), the source of the Eclectic "Helonin." One of its common names is "False Unicorn Root." You will find a description of it and its uses in King's American Dispensatory, Ed. of 1876, p. 418, and in the recently published supplement (1880), a plate illustrating it. We find no allusion to its usefulness in curing the effects of snake-bites, and it should be remembered that the number of plants of which such virtue is alleged is almost numberless. As for the value of "certificates" of "truthful and respectable citizens" to prove the efficacy of any particular remedy, one is apt to take them with liberal qualifications if he has read the history of Perkin's Metallic Tractors, Swaim's Panacea, etc. The value of the drug as a stimulant of the digestive organs is more generally acknowledged.

No. 905.—**Ferrated Cod-Liver Oil** (U. S.).

We have already, in a former issue of our journal, given a few formulæ for preparing this compound. Among them we quoted that of Bernbeck, improved by Wachsmuth, by means of oleate of iron (see NEW REM., 1876, 166). We will repeat it here, as there appears to be a somewhat increased demand for it in some sections of the country at present:

Prepare a 10-per-cent solution of pure ferrous sulphate, filter, heat it nearly to boiling, and pour it into double its weight of a hot 5 per cent solution of pure Castile soap, as neutral as possible, and dried before being weighed and dissolved. There results immediately a greenish-gray resinous mass—an iron-soap or ferrous oleate—which adheres to the walls of the vessel and the spatula, while the almost clear liquid contains the soluble products of decomposition and the excess of ferrous sulphate. The liquid is thrown away, the ferrous soap kneaded and washed with hot water, and dried on the water-bath. The yield is about 85 per cent of the Castile soap used. By gently warming together 4 parts of ferrous oleate and 96 parts cod-liver oil, a clear solution is obtained, of mild

taste and deep-brown color, which does not require filtering. The ferrous oleate may also be kept, as such, after being dried, and used when wanted. Or, double the above quantity may be dissolved in the cod-liver oil, and, when the latter is to be dispensed, it may be diluted with an equal part of pure cod-liver oil. Dr. Geissler remarks in *Pharm. Centralhalle*, No. 11, that Bernbeck is not correct in stating the percentage of metallic iron in the finished preparation to be 1 per cent—it cannot be more than about 0.3 per cent.

No. 906.—**Emulsion of Cod-Liver Oil** (Several Correspondents).

We refer you to the paper by Dr. A. B. Huested, read at the late meeting of the New York State Pharmaceutical Association, on page 194 of this number.

No. 907.—**Prescription** (S. F., Mo.).

This correspondent sends us two formulæ, and wants us to say which of them is correctly written. He states that the intention was to produce a 4 oz. mixture:

a. ℞ Potassii bromidi.....ʒ 4
Aquæ destillatæ.....fl. ʒ 4

b. ℞ Potassii bromidi.....ʒ 4
Aquæ destillatæ.....q. s. ad fl. ʒ 4

If you take 4 fl. oz. of water and dissolve in it any solid, the result will be that the volume will increase more or less. This increase is not the same for all substances. Whenever chemical union takes place, as, for instance, when an anhydrous salt, capable of forming a definite hydrate, is dissolved in water, there will be a *proportionately* smaller increase of bulk than if the same amount of hydrated salt be used. In other words, the anhydrous salt will, in the first place, abstract from the total volume sufficient water to convert it into a hydrate, during which operation there will be a contraction in volume between the molecules of anhydrous salt and the water it requires for hydration. The produced hydrate will then dissolve in the remaining water, and there will be no further contraction, but an increase of volume. Now, bromide of potassium is a salt which does not contain or require any water of crystallization, hence from the moment that it is added to a given volume of water, the latter will increase. Mr. Candidus, of Mobile (see *Proc. Amer. Pharm. Assoc.*, XXVII., 1879, 709), has found that on adding 10 grams of this salt to 30 cubic centimeters of water, there is an increase in volume of 3.2 cubic centimeters, or a little over one-tenth. In the above prescription—formula *a*—the increase is proportionately smaller, but nevertheless there is an increase, hence it will measure *more* than 4 fl. oz.

The correct formula is given in *b*.

No. 908.—**Insect Powder** (E. P. H.).

This is derived either from species of *Chrysanthemum* (chiefly *cinerariæfolium*), native of Southern Europe, and cultivated chiefly in Dalmatia, or from species of *Pyrethrum* (chiefly *carneum* and *roseum*), native of Western Asia, and cultivated in Persia and the Caucasus. The best and most abundant in the market is the former. If you will compare our volume for 1880, p. 210; our last number, p. 178; and particularly our last January number, p. 3, you will find more ample information.

No. 909.—**Sulpho-Urea** (Subscriber).

Our correspondent asks: What is "sulpho-urea" or "thio-carbamide," in the article "To Coat Articles with Lead," on page 118 of the last April number?

Urea, which was first recognized in 1773, by Rouelle, as a peculiar constituent of urine, is particularly interesting through the fact that it was the first proximate organic principle which has been produced artificially (by Woehler, in 1828), and thereby initiated the study of chemical synthesis. At first it was produced by a molecular reconstruction of cyanate of ammonium $NH_4.CNO$, on evaporation of its aqueous solution, producing CH_4N_2O, or as it is now more rationally written, $CO(NH_2)_2$. There are now more than a dozen methods (with variations) known for its production. A thorough study of its behavior and derivatives has shown that it must be regarded as a substitution product of (hydrated) carbonic acid, $CO(HO)_2$, the 2 molecules of hydroxyl being replaced by 2 molecules of amidogen (NH_2), thus: $CO(NH_2)_2$. This is the *amide of carbonic acid*, or more generally called *carbamide*. Carbamide or urea itself may form various classes of substitution products. In the molecule CON_2H_4, one, two, three, or all four atoms of H may be replaced by univalent radicals; or radicals of higher saturating power may enter in combination. On the other hand, Reynolds, in 1869, discovered a body which corresponds in composition and in its derivatives closely to urea, only that it contains sulphur in place of oxygen, thus: CSN_2H_4 or $CS(NH_2)_2$. It is prepared in various ways. According to Volhard the best way is to heat sulphocyanide of ammonium until it melts, and to keep it at this temperature for one or two hours; when cold it is to be rubbed to powder, mixed with about two-thirds of its weight of cold water, and the liquid portion removed by aspiration on a rapid filter. Nearly all that remains is *sulpho-urea* or *thio-carbamide*, that is carbamide (urea) in which oxygen is replaced by sulphur (Greek: Θεῖον, theion). It may be purified by repeated crystallization from water. On digesting sulpho-urea with various metallic salts, as acetate of lead, cyanide of mercury, nitrate of silver, ammonio-nitrate of silver, etc., etc., the sulphur is removed at once and a sulphide of the metal is produced.

No. 910.—**Peppermint Cordial** (J. W. M., F.).

The following formula is said to produce a fine article, provided the ingredients were good. Particular care must be paid to the quality of the essential oil.

English oil of peppermint, 5 oz., is added to alcohol, 3 pints, and the mixture is agitated well together for some time, in a corked bottle capable of holding 4 pints or more; it is then emptied into a cask having a capacity of upwards of 100 gallons, and perfectly white and flavorless proof spirit (50% alcohol), 36 gallons, is poured in, and the whole well agitated for ten minutes; a solution of the best double refined lump sugar, 275 lbs., in about 35 gallons of pure filtered rain water, is then added, and the contents of the cask well stirred up in the usual manner for at least 15 minutes, sufficient clear rain water to make up the whole quantity to exactly 100 gallons, and holding in solution alum, 5 oz., is next added, and the whole is again well agitated for at least a quarter of an hour, after which the cask is bunged, and allowed to repose for a fortnight before it is broached for sale.

The sugar must yield a colorless solution, and the cask should be one which does not yield coloring matter to the spirit—an empty gin-pipe is best. This liquor is much used in England, and unfortunately one of those beverages which are apt to be at first taken as a sort of domestic remedy for flatulence or gastric disturbances generally, but which thereby engenders a craving for alcoholic stimulants, and very generally succeeds in turning out bibblers or drunkards, particularly among the female sex.

No. 911.—**Ginger Wine, Ginger Ale** (Dayton).

Following you will find several formulæ taken from our files.

1. Put into a very clean boiler 10 gallons of water, 15 pounds of lump sugar, with the whites of 6 or 8 eggs, well beaten and strained, mix all well while cold; when the liquor boils skim it well, put in half a pound of common white ginger, bruised, and boil it twenty minutes. Have ready the rinds (cut *very* thin) of seven lemons, and pour the hot liquor on them; when cool put it into the cask, with two spoonfuls of yeast, put a quart of the warm liquor to two ounces of isinglass shavings, whisk it well three or four times, and put all into a barrel. Next day bung it up, in three weeks bottle it, and in three months it will be fit for use.

2. Take of cold soft water, 19 gallons; Malaga raisins, 50 lbs.; cream of tartar, in powder, 4 oz. Ferment together. Mix ginger, in powder or bruised, 20 oz.; 18

lemons, peel and juice. Add brandy, 2 quarts or more. This will make 18 gallons.

3. Take 20 quarts of water, 5 lbs. of sugar, 3 oz. of white ginger, 1 oz. of extract of licorice. Boil them well together, when cold put a little new yeast upon the mixture, then put it into the barrel for 10 days, and afterwards bottle it, putting a lump of white sugar into every bottle.

4. To 7 gallons of water put 19 lbs. of sugar, and boil it for half an hour, taking off any scum which may rise; then take a small quantity of the liquor, and add to it 9 ounces of the best ginger, bruised. Now put it all together, and when nearly cold chop 9 lbs. of raisins very small, and put them into a 9 gallon cask with 1 ounce of isinglass. Slice 4 lemons into the cask, taking out all the seeds, and pour the liquor over them, with half a pint of fresh yeast. Leave it unstopped for three weeks, and in about three months it will be fit for bottling.

There will be one gallon of the sugar and water more than the cask will hold at first, this must be kept to fill up as the liquor works off, since it is necessary that the cask should be kept full till it has finished working. The raisins should be two-thirds Malaga and one-third Muscadel. Spring and autumn are the best seasons for making this wine.

No. 912.—**Naboli.**

One of our correspondents desires to know the composition of "Naboli," made by the Dennett Dental Co., of Boston; also, how it acts as an obtundant, and whether it is injurious to the teeth. It is used by dentists to prevent pain while filling teeth.

No. 913.—**Naphtha Medicinale** (M. M.).

The expression "naphthæ medicinalis," in Reynolds' System of Med. (Lea), II., 140, is the possessive case of "naphtha medicinale," which means "medicinal petroleum." The article is by Dr. Bennett, and we presume that he meant by it the medicinal petroleum officinal in the German and French pharmacopœias. The Germ. Pharm. defines it as Oleum Petræ Italicum.

No. 914.—**Mocking-Bird Food** (R. P. F.).

We find the following on our files: Mix together 2 parts of corn-meal, 2 parts of pea-meal, and 1 part of moss-meal. Add just enough melted lard to make the mixture very slightly greasy, and sweeten it with molasses. Fry it in a frying pan for about ½ hour, stirring constantly, without letting it burn. This makes it keep well. Preserve it in a covered jar. The moss-meal is prepared by drying and grinding the imported German moss-seed.

On page 369 of NEW REMEDIES, for 1878, we published a formula given us by Mr. Francis X. Hart, of this city (cor. 57th st. and Second ave.), which is used by him in the manufacture of a food for soft-billed birds, such as mocking-birds, thrushes, robins, sky-larks, blackbirds, starlings, etc.

Hemp seed	3 parts.
Zwieback (toasted wheat bread)	2 "
Maw seed	1 part.
Ox heart	1 "

Boil the ox heart well in water, cut it small, and place it on a pan in an oven, where it must be allowed to become perfectly dry and crisp. All the ingredients must then be thoroughly mixed and ground in a mill to coarse powder.

A THIRD FORMULA.

Ox heart, dried	2 parts.
Poppy-seed cake	2 "
Bread, dried	2 "
Ants' eggs, dried	2 "
Hemp seed	1 part.
Corn meal	1 "
Lard	1 "

Grind to a coarse powder and mix with the lard, previously melted. When given to the birds, mix with it an equal quantity of grated carrots.

No. 915.—**Carmine** (J. S. M.).

The figures attached in commerce to different grades of carmine are expressive of the grade of fineness or rather purity, and No. 40 is generally accepted as the standard number. Why this number has been chosen, and what exact relation the other figures have to the price further than that a lower figure corresponds to a lower price we have not been able to ascertain. Perhaps some of our readers may happen to be possessed of information on this subject. The term "nacarat" is a French adjective used to denote a bright-red color with a slight orange tint. It is the Spanish and Portuguese *nacarado*, "having the color of the nácar or mother-of-pearl." It is used to denote a very fine grade of carmine, superior to the commercial No. 40, and higher in price. There is still a finer grade, which is known as "Oriental," and which costs about three times as much as No. 40.

No. 916.—**Red and Blue Stamping Ink** (R. P. F.).

The following yield good preparations:

Blue.

Indigo, in fine powder	10 parts.
Gum arabic	4 "
Glycerin	4 "
Water	3 "

Dissolve the gum in the water, mix it with the glycerin, and then triturate it thoroughly either in a mortar or by means of a slab and muller, with the indigo until a perfectly homogeneous mixture is obtained.

Red.—This may be prepared in the same manner, only that some red coloring matter is substituted, such as minium, or carmine, or fuchsine, etc. If the latter, or some other aniline color is used, the quantity must be very considerably reduced, but the mixture may be thickened by the addition of dextrin.

No. 917.—**Vaseline Jelly** (W. W. S.).

This is merely another name for vaseline—a substance which you certainly must be acquainted with. Regarding its mode of preparation, you may consult our April number, p. 105.

No. 918.—**Prescription** (A. T.).

The following prescription has been sent to us, with the request to state whether a clear mixture can be made of it, and whether the addition of phosphoric acid will accomplish the object.

℞ Quiniæ sulphat	grs. 32
Ferri pyrophos	grs. 48
Acidi citrici	q. s.
Elixir	q. s. ad fl. ℥ 2

We do not believe it possible that this can be made into a clear mixture. To dissolve the sulphate of quinine a quantity of acid is required which will decompose the pyrophosphate. Remember that the latter salt is a solution of the otherwise insoluble white pyrophosphate of iron in citrate of ammonium. The addition of acids disturbs this relation and induces a separation of the pyrophosphate in a gelatinous condition. This is particularly the case with mineral acids. If enough of the latter be added to decompose the whole of the citrate and to be in excess, it will redissolve the precipitate. But such a solution would be too disagreeably acid. The only way we know out of the difficulty is to advise the physician to reduce the ingredients to a very much smaller quantity. It is best to use only enough sulphate of quinine to be soluble, without any foreign agent, in the elixir itself (about 2 grains per oz.); in this case the pyrophosphate will not encounter any incompatible substance.

No. 919.—**Bandoline.**

One of our subscribers desires to know how to prevent bandoline, made of tragacanth, showing on the hair in white scales. He finds that which is made with even the very best gum does this, and is aware that it can be prevented in some manner, though he has not yet discovered it. Can some of our readers answer?

Beasley directs an ounce of the finest picked gum traga-

canth reduced to a coarse powder, and one pint of rose-water to be put into a wide-mouthed vessel. The ingredients are to be shaken daily for two or three days and then strained, with gentle pressure, through fine linen or cambric. If desired to be colored, cochineal may be infused in the rose-water before the addition of the gum.

Another Formula (Redwood's).

Gum tragacanth	℥ iss.
Water	℥ vij.
Proof spirit	℥ iij.
Otto of roses	gtt. x.

Macerate for twenty-four hours and then strain.

Still Another Formula.

Gum tragacanth	6 oz.
Rose-water	1 gall.
Oil of rose	½ drachm.

Steep the gum in the rose-water one or two days until it forms a gelatinous mass, shaking it well. After macerating forty-eight hours, strain it through a coarse linen cloth and allow it again to stand for a day or two. Strain it again in a similar manner and then add the perfume.

ITEMS.

An Act to Prevent the Adulteration of Food or Drugs.*

Be it enacted, &c.,

Section I. No person shall, within this State, manufacture, have, offer for sale, or sell any article of food or drugs which is adulterated within the meaning of this Act, and any person violating this provision shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished by a fine not exceeding one hundred dollars.

Section II. The term "food" as used in this Act shall include every article used for food or drink by man.

The term "drug" as used in this Act shall include all medicines for internal or external use.

Section III. An article shall be deemed to be adulterated within the meaning of this Act—

a.—In the case of drugs.

1. If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein.

2. If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia or other standard work on Materia Medica, it differs materially from the standard of strength, quality or purity laid down in such work.

3. If its strength or purity fall below the professed standard under which it is sold.

b.—In the case of food or drink.

1. If any substance or substances has or have been mixed with it so as to reduce or lower or injuriously affect its quality or strength.

2. If any inferior or cheaper substance or substances have been substituted wholly or in part for the article.

3. If any valuable constituent of the article has been wholly or in part abstracted.

4. If it be an imitation of or be sold under the name of another article.

5. If it consist wholly or in part of a diseased or decomposed, or putrid, or rotten, animal or vegetable substance, whether manufactured or not, or in the case of milk, if it is the produce of a diseased animal.

6. If it be colored, or coated, or polished, or powdered, whereby damage is concealed, or it is made to appear better than it really is, or of greater value.

7. If it contains any added poisonous ingredient, or any ingredient which may render such article injurious to the health of persons consuming it: *Provided*, That the State Board of Health may, with the approval of the Governor, from time to time declare certain articles or preparations to be exempt from the provisions of this Act: *And provided further*, That the provisions of this Act shall not apply to mixtures or compounds *recognized* as ordinary articles of food, provided that the same are not injurious to health and that the articles are distinctly labeled as a mixture, stating the components of the mixture.

Section IV. It shall be the duty of the State Board of Health to prepare and publish from time to time, lists of the articles, mixtures or compounds declared to be exempt from the provisions of this Act in accordance with the preceding section. The State Board of Health shall also from time to time fix the limits of variability permissible in any article of food or drug, or compound, the standard of which is not established by any National Pharmacopœia.

Section V. The State Board of Health shall take cognizance of the interests of the public health as it relates to the sale of food and drugs and the adulteration of the same, and make all necessary investigations and inquiries relating thereto. It shall also have the supervision of the appointment of public analysts and chemists, and upon its recommendation whenever it shall deem any such officers incompetent, the appointment of any and every such officer shall be revoked and be held to be void and of no effect. Within thirty days after the passage of this Act, the State Board of Health shall meet and adopt such measures as may seem necessary to facilitate the enforcement of this Act, and prepare rules and regulations with regard to the proper methods of collecting and examining articles of food or drugs, and for the appointment of the necessary inspectors and analysts; and the State Board of Health shall be authorized to expend, in addition to all sums already appropriated for said Board, an amount not exceeding ten thousand dollars for the purpose of carrying out the provisions of this Act, and the sum of ten thousand dollars is hereby appropriated out of any money in the treasury not otherwise appropriated, for the purpose in this section provided.

Section VI. Every person selling or offering or exposing any article of food or drugs for sale, or delivering any article to purchasers, shall be bound to serve or supply any public analyst or other agent of the State or local Board of Health appointed under this Act, who shall apply to him for that purpose, and on his tendering the value of the same, with a sample sufficient for the purpose of analysis of any article which is included in this Act, and which is in the possession of the person selling, under a penalty not exceeding $50 for a first offence, and $100 for a second and subsequent offences.

Section VII. Any violation of the provisions of this Act shall be treated and punished as a misdemeanor; and whoever shall impede, obstruct, hinder, or otherwise prevent any analyst, inspector, or prosecuting officer in the performance of his duty shall be guilty of a misdemeanor, and shall be liable to indictment and punishment therefor.

Section VIII. Any Act or parts of Acts inconsistent with the provisions of this Act are hereby repealed.

Section IX. All the regulations and declarations of the State Board of Health made under this act, from time to time and promulgated, shall be printed in the Statutes at Large.

Section X. This Act shall take effect at the expiration of ninety days after it shall become a law.

*Approved by the Governor of the State of New York, June 25th, 1881.

Presidents of the New York State Pharmaceutical Association.

PROF. PETER WENDOVER BEDFORD, the President of the New York State Pharmaceutical Association during its first two years of existence, was born in Fishkill village, New York, August 1st, 1836. At ten years of age (thrown on his own resources) he entered a Wall street office, and four years later engaged as a boy in a drug store in this city. He was a clerk with Ewen McIntyre

for five years, and graduated from the New York College of Pharmacy in 1858. He started in business on his own account in Sixth avenue and Forty-second street, in 1859 (removing in 1863 to the next block above), and continued in the retail business until 1870, having spent over twenty years in retail business. For the past ten years he has been in the wholesale drug business, of which the past eight years he has been with Lazell, Marsh & Gardiner, of New York.

In 1860, he was elected secretary of the College of Pharmacy, holding the office until 1870, when he was elected a trustee, in which office he served for three years following. In 1873 he was elected to the Chair of Pharmacy, which he now holds. In 1858 he joined the American Pharmaceutical Association, attending the meeting at Boston in 1859 and has been present at every meeting since except in 1866 (in Detroit) and 1878 (in Atlanta). He served as Corresponding Secretary from 1860–62 and 1863–66; as Recording Secretary in 1862 and was the first Local Secretary in 1866. He served as Chairman of Committee on Drug Market in 1872 and 1873.

PROF. P. W. BEDFORD.

A. B. HUESTED, M.D.

He has contributed numerous papers to the American Pharmaceutical Association; has furnished all the reports of the meetings of the Association to the *Druggists' Circular* since 1867, except that of the Atlanta meeting, and numerous articles in pharmaceutical literature.

It may justly be said that Professor Bedford was the founder of the New York State Pharmaceutical Association, and that it is largely due to his constant and unwearied effort for more than two years that it exists in its present flourishing condition.

MR. ALFRED BIRCH HUESTED, the President-elect of the New York State Pharmaceutical Association, whose portrait we publish herewith, was born at Clifton Park, Saratoga County, N. Y. Before his first year of age his father died. Until he was twelve years old he lived in Saratoga County and in Amsterdam, Montgomery County. Since that time his home has been in Albany. When he was sixteen years old he entered a retail drug-store and remained nearly four years, then realizing the mistake made by too many youths in not improving educational advantages. This defect he labored assiduously to repair, and he then began the study of medicine. In 1863 he took the degree of Doctor of Medicine at the Albany Medical College, and in March, 1864, entered the army as Assistant Surgeon of the Twenty-first New York Volunteer Cavalry, and remained in active duty with his regiment in the Shenandoah Valley until the close of the war, in the following year. His regiment was then sent to the west to guard the overland stage route to California, and remained in service until July, 1866. Dr. Huested then returned home and entered the practice of medicine, but, after two years, became convinced of a decided preference for pharmacy, and in 1868 he commenced business in his present location. Time has only increased the interest which he takes in his present profession and added to his material success.

The British Pharmacopœia.—The General Medical Council seem determined not to print a new pharmacopœia until they have sold the 4,000 copies of the old one still on hand. Seven hundred copies are sold every year. Still, after a discussion, a Pharmacopœia Committee was appointed to report annually to the Council.—*Chem. and Drug.*

PHARMACEUTICAL CALENDAR.—July.

N. B.—The officers of Societies, Colleges of Pharmacy, Pharm. Associations, etc., will oblige us by forwarding schedules of their meetings, lists of officers, and any changes that may be desirable.

Date.	Society Meetings.
Fri. 1st.	Cleveland Pharm. Assoc.—Bimonthly M.
Mon. 4th.	Erie Co. Pharm. Ass.—Monthly Meeting to be held later.
	Pittsburgh Coll. Ph.—Quart. Meet.
Tues. 5th.	Davenport (Iowa) Pharm. Assoc.—Quar. M.
	Phila. Coll. Pharm.—Trust. Meet.
	Maryland Coll. Pharm.—Trust. Meet.
Thurs. 7th.	Louisville Coll. Pharm.—Pharm. Meet.
	Massach. Coll. Pharm.—Trust. Meet.
	N. Y. Coll. Pharm.—Trust. Meet.
Mon. 11th.	R. I. Pharm. Assoc.—Quart. Meet.
Tues. 12th.	Kings Co. Pharm. Soc.—Monthly Meet.
	Pittsburgh Coll. Pharm.—Trust. Meet.
	Chicago Coll. Pharm.—Trust. Meet.
	St. Louis Coll. Pharm.—Pharm. Meet.
	National Coll. Ph.—Trust. Meet.
Wed. 13th.	Cincinnati Coll. Ph.—Mo' Meet. and Elect.
Thurs. 14th.	California Coll. Pharm.—Quart. Meet.
	Newark Pharm. Assoc.—Monthly Meet.
	Maryland Coll. Ph.—Meet. and Election.
	Louisville Coll. Ph.—Directors' Meet.
	N. Y. Germ. Apoth. Soc.—Semi-ann. M.
	Phila. Coll. Ph.—Alumni Pharm. Meet.
Tues. 19th.	St. Louis Coll. Ph.—Trust. and Alumni M.
	Phila. Coll. Pharm.—Pharm. Meet.